S. Hrg. 101-1179, Pt. 2

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

H.R. 5769

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1991, AND FOR OTHER PURPOSES

Part 2 (Pages 1-812)

Congressional witnesses
Department of Energy
Department of the Interior
National Endowment for the Arts
National Endowment for the Humanities

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CONTENTS

TUESDAY, MAY 1, 1990

Page

Department of the Interior: Bureau of Land Management 1

MONDAY, MAY 7, 1990

Department of the Interior: Bureau of Mines 121

MONDAY, MAY 14, 1990

Department of Energy: Fossil Energy 201

FRIDAY, MAY 18, 1990

Department of the Interior: Office of Surface Mining Reclamation and Enforcement [OSMRE] 259

WEDNESDAY, JUNE 6, 1990

National Endowment for the Humanities 379

National Endowment for the Arts 425

TUESDAY, JUNE 12, 1990

Congressional witnesses 579

Department of Energy: Secretary of Energy 615

TUESDAY, JULY 12, 1990

Department of the Interior: Secretary of the Interior 669

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

TUESDAY, MAY 1, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:13 p.m., in room SD–192, Dirksen Senate Office Building, Hon. Harry Reid presiding.

Present: Senators Reid and McClure.

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

STATEMENT OF CY JAMISON, DIRECTOR

ACCOMPANIED BY:

- ROGER L. HILDEBEIDEL, CHIEF, DIVISION OF BUDGET
- MEL BERG, CHIEF, DIVISION OF FORESTRY
- J. DAVID ALMAND, CHIEF, DIVISION OF WILDLIFE AND FISHERIES
- ANTHONY ITTEILAG, DIRECTOR, OFFICE OF BUDGET, DEPARTMENT OF THE INTERIOR

BUDGET REQUEST

Senator REID. The subcommittee will come to order. This afternoon we will review the fiscal year 1991 budget request for the Bureau of Land Management. Testifying in support of that request will be the Director, Mr. Cy Jamison.

The Bureau of Land Management's request is $833,112,000, which is actually a decrease of $145,471,000 below the current year appropriation of $978,583,000. The reduction is almost entirely associated with $144,258,000 from the prior year fire repayment costs included in the fiscal year 1990 appropriation.

I would note that the supplemental, which is being currently considered by the Senate, contains an additional $176,700,000 for firefighting expenses.

In fiscal year 1990, additional funds were available for Oregon and California grant lands from receipts in excess of those estimated in the President's budget.

When the firefighting and Oregon and California [O&C] excess receipts are removed from the comparison, BLM's fiscal year 1991 budget request is $28,780,000, an increase of 4 percent over the fiscal year 1990 appropriation.

The proposed $28.8 million increase includes a $23.6 million increase, or 5 percent, for the management of lands and resources appropriation. Energy and minerals management is proposed to decrease by $9.7 million from the enacted fiscal year 1990 level of $70.4 million.

The mining, law administration program is reduced to zero, reflecting proposed legislation to fund activities through an offsetting collection account. The renewable resources management increase of $7.3 million from the fiscal year 1990 level includes increases for global climate change studies, additional implementation of range allotment management plans, and recreation management.

The request proposes a $3.98 million increase for information and resources data management, which is directed to the automated land and mineral records system. A $13.5 million increase for resource protection and maintenance supports the Secretary's Legacy '99 initiative for facility maintenance and hazardous material management.

BLM is also requesting a $7 million increase for general administration, and a $1.2 million increase for the Lands and Realty Management Program above the appropriated level for fiscal year 1990.

Construction and access is proposed at $8.9 million, which includes a $207 million increment for the America the Beautiful initiative. The $8.9 million request is an increase of $3 million above the fiscal year 1990 enacted level of $5.9 million.

The land acquisition request is proposed at $24.3 million, which is $11.7 million, or 93 percent, above the fiscal year 1990 appropriation of $12.6 million. The $11.7 million increase is a component of the America the Beautiful proposal.

In addition, an employment level of 11,397 full-time equivalents is proposed, which is 49 more than fiscal year 1990 program level of 11,348.

The subcommittee welcomes you, Mr. Jamison. We have your written statement, and it will be made a part of the record. As is the custom with the committee, since this is your first appearance before the subcommittee, your biography will be included in the record.

I would ask that you introduce your associates, and then if you would summarize your statement, we will move on to other questions.

INTRODUCTION OF ASSOCIATES

Mr. JAMISON. Thank you, Mr. Chairman. Sitting to my right, and your left, is Dave Almand, who is the Chief of the Division of Wildlife and Fisheries; and to my far left is Mel Berg, who is the Chief of the Division of Forestry; and sitting next to me is the Bureau Budget Officer, Roger Hildebeidel; and also with us today is Tony Itteilag, the Director of Budget for the Department of the Interior, and so we have a good backup team associated with us.

DIRECTOR'S SUMMARY STATEMENT

I have a very brief summary statement that I will just read very quickly if you don't mind, Mr. Chairman. I believe that the Bureau's and the President's budget shows that BLM has turned the corner in its management emphasis for the public lands and resources.

I am sure that this change is recognizable to reviewers of the President's proposals. I am looking forward to moving the BLM forward with the initiatives and programs that are contained in this budget.

I am pleased with the 1991 budget, and it makes a good start on my initiatives for BLM. It is significant to note that the President and Secretary Lujan recognize the need for increased management attention for the public lands, even through these times of fiscal constraint.

I believe that this budget strikes a good balance between these two issues. The fiscal year 1991 budget of $1.008 billion will support 11,500 FTE's, and provide the American public with resource management and stewardship that they expect on the public lands that are BLM's responsibility.

With it, we can achieve a more acceptable balance between the traditional consumptive resource uses and the demands for other uses, such as recreational opportunities and wildlife habitat needs. We plan to deliver in both of these areas.

Very briefly, I would like to mention several initiatives contained within the budget. America the Beautiful is a major initiative of President Bush's, which is proposed to be funded at $69.3 million for BLM, $18.8 million above the fiscal year 1990 enacted funding.

Work will be accomplished in BLM's Recreation Management, Wildlife and Fish Habitat Management, Construction, and Land Acquisition Programs. These programs increase our continued efforts to implement the initiatives begun in our recreation 2000 and fish and wildlife 2000 strategic program plans.

Mining law administration is proposed to be funded through the collection of an annual holding fee of $100 per mining claim. The fee will replace the current requirement of annual assessment work on mining claims.

In addition to generating revenue, this proposal is expected to reduce the adverse impacts from surface disturbance on the public land that are as a result of efforts solely to maintain claims.

Another program, maintaining infrastructure, or Legacy '99 as we like to call it, is a Department of the Interior initiative which is intended to repair and rehabilitate BLM facilities and the environmental infrastructure. It includes increases of $5.8 million for hazardous materials management, $10.5 million for facilities maintenance, and $1.8 million for construction.

The Secretary's education initiative will be enhanced with an increase of $1.4 million, and this will allow for expansion of Alaska's Resource Apprenticeship Program to other States; continuing to support the Historically Black Colleges and Universities Program, and increasing ongoing environmental and resource education activities.

BLM will play a significant role in the global climate change initiative by doing studies that will focus on Western ecosystems, including desertification, at a cost of $2.4 million.

The automated land and mineral records system, better known as ALMRS, is proposed to be funded at $26 million. The funding of this program at the requested level will continue to provide for the continuing computerization of the Nations's land and mineral records.

A $2 million increase is included as part of the Secretary's initiative on volunteers. This increase is distributed into six BLM programs, and will be used to support and encourage expanded opportunities for volunteerism on the public lands.

PREPARED STATEMENT

In support of the Secretary's stewardship initiative, BLM budget increases are also requested for rangeland management, cultural resources management, oil and gas, resource protection, and law enforcement.

Thank you, Mr. Chairman; that concludes my statement, and I will be happy to answer any of your questions.

[The statement follows:]

STATEMENT OF CY JAMISON

Mr. Chairman and Members of the Subcommittee:

I welcome this opportunity to appear here today to discuss the Bureau of Land Management's (BLM) budget request for 1991.

I believe that the President's 1991 Budget shows that BLM "has turned the corner" in its management emphasis for the Public Lands and resources. I'm sure that this change is recognizable to reviewers of the President's proposals. I am looking forward to moving the BLM forward with the initiatives and programs that are contained in this Budget.

I recognize that there is a big job to be done and it will take a period of time to accomplish all that must be done. I am, however, very pleased with BLM's 1991 budget, as it makes a good start on my initiatives for BLM. It is significant to note the President's and Secretary Lujan's recognition that there is need for increased management attention for the Public Lands, even though these are times of fiscal restraint. I believe the BLM's budget strikes a good balance between these two issues.

The FY 1991 Budget of $1.008 billion for BLM, which will support 11,500 FTE, provides the American public with the resource management and stewardship that they expect on the Public Lands under BLM's responsibility. With it, we can achieve a more acceptable balance between the traditional "consumptive" resource uses and the demands for other uses such as recreational opportunities and wildlife habitat needs. We plan to deliver in both of these areas.

Very briefly, I would like to mention several of the initiatives contained within the budget:

MAJOR INITIATIVES

"AMERICA THE BEAUTIFUL" is a major initiative of President Bush which is proposed to be funded at $69.3 million for BLM, which is $18.8 million above 1990 enacted funding. Work will be accomplished in BLM's Recreation Management, Wildlife and Fish Habitat Management, Construction, and Land Acquisition programs. These program increases continue BLM's efforts to implement the initiatives begun in our "RECREATION 2000" and "FISH AND WILDLIFE 2000" strategic program plans.

"MINING LAW ADMINISTRATION" is proposed to be funded through the collection of an annual holding fee of $100 per mining claim. The fee will replace the current requirement to do annual assessment work on mining claims. In addition to generating revenue, this proposal is expected to reduce the adverse impacts from surface disturbance on the Public Land that are a result of efforts solely to maintain claims.

"MAINTAINING INFRASTRUCTURE - LEGACY 99" is an Interior Department initiative which is intended to repair and rehabilitate BLM facilities and the environmental infrastructure. It includes increases of $5.8 million for Hazardous Materials Management, $10.5 million for Facilities Maintenance, and $1.8 million for Construction.

The Secretary's "EDUCATION" initiative will be enhanced with an increase of $1.4 million which allows for expansion of Alaska's Resource Apprenticeship Program to other states; continuing to support the Historically Black Colleges and Universities program, and increasing ongoing environmental and resource education activities.

BLM is planning on a significant role in the "GLOBAL CLIMATE CHANGE" initiative by doing studies that will focus on western ecosystems, including desertification. $2.4 million is requested in the 1991 Budget.

The Automated Land and Mineral Records System (ALMRS) is proposed to be funded at $26.0 million. Funding this program at the requested level will provide for the continuing computerization of the Nation's Land and Mineral records.

A $2.0 million increase is included as part of the Secretary's initiative on "VOLUNTEERS". This increase is distributed into six BLM programs and will be used to support and encourage expanded opportunities for volunteerism on the public lands.

In support of the Secretary's "STEWARDSHIP" initiative, BLM budget increases are also requested for Rangeland Management, Cultural Resources Management, Oil and Gas, Resource Protection and Law Enforcement.

Attached to my statement, is a more detailed breakdown of the highlights of the BLM's 1991 budget request.

This concludes my prepared statement. My associates and I will be pleased to answer any questions or provide additional information which will assist you in assessing our budget request.

Attachment:
  Highlights of the 1991 Budget Request (BLM)

BUREAU OF LAND MANAGEMENT

HIGHLIGHTS OF THE 1991 BUDGET

The BLM's 1991 Budget is $1.008 billion, an increase of $67.8 million over the 1991 base level. This level will support a total of 11,500 FTE. The 1991 request includes the increases requested under President Bush's **America the Beautiful** initiative to improve the environment, protect the Nation's resources and enhance recreational opportunities on Federal lands. The **America the Beautiful** initiative provides for an $18.8 million increase over the FY enacted level in four separate BLM programs.

The 1991 Budget request is a decrease of $258.7 million from the 1990 adjusted appropriation of $1.27 billion. However, the 1990 adjusted appropriation contained several one-time appropriations ($325.1 million) for programs such as fire repayments, the Cook Inlet Region, Inc. account, and Oregon & California Grant Lands "excess receipts". Adjusting for these amounts, the BLM request for 1991 is an increase of $66.5 million above the 1990 enacted level.

"AMERICA THE BEAUTIFUL"

To carry out his pledge to undertake a program to strengthen and preserve the Nation's natural resources, President Bush has included in the 1991 budget, an initiative called **America the Beautiful**. The purposes of this initiative are to improve the environment by promoting reforestation, enhancing recreation opportunities, and provide for the protection and restoration of nationally significant natural and cultural resources.

The BLM's portion of the **America the Beautiful** program includes funding proposals for increased land acquisition; recreation resources management and wildlife habitat management programs; and for certain construction projects that benefit the conservation of these natural resources or enhance recreational opportunities on the Public Land.

Under this program, the BLM would receive funds from the new Departmental **America the Beautiful** account that will allow it to administer these activities at an enhanced level in 1991. In total, BLM will devote over $69 million in support of the **America the Beautiful** initiative. The following programs will receive a total funding increase of $18.8 million over the 1990 adjusted appropriation level:

Land Acquisition	+ $11.7 million
Management of Lands and Resources (Recreation and Wildlife programs)	+ $ 6.9 million
Construction	+ $ 0.2 million

RECEIPTS

In 1991, BLM will collect an estimated $473.8 million in receipts from sales of lands and vegetative products, grazing fees, timber sales and other miscellaneous sources. This total includes the effect of the proposed establishment on Federal Lands of a $100 per claim annual holding fee for each mining claim. This proposal has increased the estimated total receipt collections by $97.5 million.

In addition, BLM activities contribute directly toward the generation of more than $1 billion in receipts connected with the leasing of onshore Federal minerals. These receipts are collected and disbursed by the Minerals Management Service.

MANAGEMENT OF LANDS AND RESOURCES

The 1991 request for "Management of Lands and Resources (MLR)", BLM's principal operating account, is $466.4 million. This is an increase of $17.6 million over the 1991 base. This account includes funds for energy and minerals management, lands and realty management, renewable resources management and their supporting services programs, and includes the MLR supported aspects of the **America the Beautiful** initiative.

For **Energy and Minerals Management**, $60.8 million is requested, a net decrease of $11.1 million from the 1991 base. The principal reason for this decrease is the Administration's proposal to fund the "Mining Law Administration" program from a portion of the new mining claim holding fee receipts. The Administration is proposing that a new $100 annual holding fee be established for each mining claim on federal land. This fee would be paid in lieu of performing the existing annual assessment work now required under current laws. The current provision in the General Mining Law of 1872 for $100 worth of annual assessment work represented a significant amount of activity and expenditure when originally enacted in 1872. However, in today's dollars, $100 worth of activity has little significance as an indicator of commitment to develop and maintain a mining claim. In addition, questions have been raised about the enforceability of the assessment requirement. The 1991 proposal addresses these problems by replacing the assessment requirement with the annual holding fee.

The proposal will provide both environmental and mineral production benefits. It will eliminate activities that result in surface disturbance of lands solely to maintain a claim. In addition, claimants who have no serious intention to mine, or who hold their claim solely for speculative purposes, may wish to relinquish claims rather than pay the annual holding fee. Since frivolous or speculative claims serve to limit the use of the Public Lands by others, the holding fee proposal may in fact result in increased access to lands for multiple use, including mineral development. This would increase opportunities for mineral exploration by other parties. The holding fee will not diminish the rights of a bona fide operator to conduct necessary exploration and development of mineral resources on public land.

The 1991 budget estimates that $97.5 million will be collected from these fees in 1991, of which $12 million will be used to fund the operation of the current "Mining Law Administration" program in the MLR account and up to $7.5 million will be available to the BLM to offset the costs of administering the holding fee program. The remaining $78 million of receipts would be deposited into the General Fund of the Treasury. As part of this proposal, the current annual assessment filing fee of $5.00 per claim will be eliminated which will reduce the reimbursable fee collections from $5.5 million in 1990 to $1.5 million in 1991. The total funding to be available for the BLM's "Mining Law Administration" program is projected to be $21.0 million in 1991. This increase also includes funding to encourage and support an increased level of volunteers in the program.

The $0.3 million increase in "Other Mineral Resource Management" will provide for increased oil shale related activities, while a decrease in the "Coal" program of $0.7 million will result in the deferral of some PRLA processing and lower priority lease management.

The $0.4 million increase from the 1991 base in the "Oil and Gas" program will be for increased inspection and enforcement activities on Federal and Indian lands. Recent reviews of the BLM's oil and gas inspection program have been conducted by the General Accounting Office, the Office of Inspector General, and the Senate Select Committee on Indian Affairs, Special Committee on Investigations. Additionally, the Office of Management and Budget has identified BLM's inspection and enforcement program of onshore oil and gas leases as a "High Risk" area for the Department of Interior, and one which could adversely impact the collection of onshore royalties and other funds owed to the Federal Government. As a result, BLM's inspection and enforcement program has been identified as a material control weakness in the Secretary's 1989 Federal Managers' Financial Integrity Report to the President and the Congress. The BLM is making every effort to take the administrative steps necessary to correct the most pressing problems in the inspection and enforcement area during 1990. The increase will enable the BLM to complete at least an additional 1,000 on-site inspections in 1991 and to provide broader inspection coverage of the leases in production through and additional 12 FTE's.

For the **Lands and Realty Management** program, the total 1991 request is $37.3 million, an increase of $382 thousand from the 1991 base. This request reflects an increase of $950 thousand from the 1991 base in the "Lands, Realty, and ROW Management" program and would be directed primarily toward land exchanges, especially those supporting the Recreation 2000 and Fish and Wildlife 2000 plan strategies. This increase is partially offset by a $562 thousand reduction from base in the in the "Alaska Lands" program resulting in a deferral of lower priority land use authorizations.

For **Renewable Resources Management**, the request totals $135.4 million, which is a $11.9 million increase from the 1991 base and includes $6.9 million for **America the Beautiful**.

Recreation Management is requested at the $34.1 million level. This includes $8.3 million for "Cultural Resources Management", $7.8 million for "Wilderness Management", and $18.0 million for "Recreation Resources Management". Within this activity, an increase of $3.7 million is proposed in the "Recreation Resources Management" program to support the **America the Beautiful** initiative through continued implementation of BLM's "Recreation 2000" plans. A $1.5 million increase in the "Cultural Resources" program will provide additional cultural site protection in response to the 1988 Archaeological Resources Protection Act (ARPA) amendments. The funding increases include expanded levels of support for the use of volunteers and multiple-use education efforts.

The "Wildlife Habitat Management" program request of $25.5 million is an increase of $2.5 million from the 1991 base in order to support the **America the Beautiful** initiative through continued implementation of BLM's "Fish and Wildlife 2000" strategic plans. This program level will provide for stepped-up accomplishments in numerous program areas such as fisheries inventory, new habitat management plans, expanded inventory for threatened and endangered species and environmental and natural resource education efforts. Additionally, challenge cost share and volunteer opportunities will be expanded to enable BLM to accomplish more wildlife projects with the assistance of cooperative groups and individuals.

The "Forest Management" program request of $6.6 million is a $0.2 million reduction from the base and will result in a minor reduction in timber sale offerings. The "Wild Horse and Burro" program will remain the same as the 1991 base of $13.5 million and will provide for the removal of 4,900 animals from Public Lands while providing for the adoption of an estimated 6,100 animals.

An increase of $1.5 million over base for the "Rangeland Management" program will provide for additional monitoring with emphasis on riparian areas as well as additional volunteers and multiple-use and riparian education efforts. The "Soil, Water and Air" program request of $18.0 million which is an increase of $2.8 million over the 1991 base will be used principally for emphasis on research for Global Climate Change ($2.4 million) but will also provide additional funds ($0.4 million) for watershed improvement in riparian areas and for non-point source pollution and salinity control.

The request for **Resource Management Planning** of $9.3 million is an increase of $0.3 million and will make it possible to continue to progress toward the BLM goal of replacing Management Framework Plans with Resource Management Plans by 1997.

The proposed level for **Information and Resource Data Management** of $47.3 million in 1991 is an increase of $3.0 million from the 1991 base. Modernization of the National land and mineral records in BLM's custody through the Automated Land and Mineral Records System (ALMRS) will continue to be the primary thrust of these programs. The proposed funding for the "ALMRS" program in 1991 of $26.0 million is a $3.0 million increase over the 1991 base and will enable the BLM to continue development of the computerization of the Nation's lands and minerals records. The goal is to begin implementation of ALMRS by the end of 1993.

The request for **Resource Protection and Maintenance** is $80.6 million, a $12.5 million increase over the 1991 base. An increase $0.8 million is requested for "Resource Protection and Law Enforcement" in order to continue drug control activities on the Public Land and to establish an incident reporting system as required by the Federal Uniform Crime Reporting Act. Secretary Lujan's initiative of **Maintaining Infrastructure - Legacy 99**, which is a stepped-up program to repair and rehabilitate Interior facilities and environmental infrastructure, is supported by a requested $7.7 million increase in the "Facilities Maintenance" program for a total program level of $26.8 million. Required maintenance actions will occur on additional recreation sites, roads, bridges and buildings which will enable the BLM to more efficiently and more safely serve the public. The requested increase includes funding for expanded use of volunteers.

The "Legacy 99" initiative is also supported by a $5.6 million increase in the "Hazardous Materials" program which will be directed at sites known to contain hazardous materials. A decrease of $1.9 million in the "Alaska Cadastral Survey" program is a result of the deferral of less critical surveys while the "Other States Cadastral Surveys" program is proposed to increase $0.2 million to $11.7 million in order to increase the surveys for the boundaries of designated wild and scenic river areas.

The **General Administration** activity funding request of $95.7 million is $0.7 million more than the 1991 base and represents a $0.1 million increase in "Fixed Costs" to support the Department's "Take Pride in America" campaign.

The $0.6 million balance of the increase will support the "Equal Employment Opportunity" program which provides direct support to the Secretary's "Excellence in Education" effort. This increase will provide for expanded efforts in the support actions for Historically Black Colleges and Universities in addition to providing an additional $0.5 million to supplement BLM's Resource Apprenticeship Program for Students (RAPS) in Alaska and to expand the program to other states.

OREGON AND CALIFORNIA GRANT LANDS (O&C) APPROPRIATION

An appropriation of $65.6 million is requested for BLM operations in western Oregon from the "Oregon & California (O&C) Grant Lands" account, an increase of $1.0 million over 1991 base. This increase provides for continuing the efforts directed toward improving the multiple use management of these valuable timberlands in western Oregon. Within the O&C Appropriation, an increase of $2.5 million over the 1991 base to $6.3 million is requested for **Western Oregon Facilities Maintenance** of which $1.5 is for "Facilities Maintenance" and $1.0 million is for "Transportation Systems Maintenance". These increases support the Secretary's **Maintaining Infrastructure - Legacy 99** Initiative. Although a decrease of $1.4 million is requested within **Western Oregon Resources Management** to a $57.3 million level, "Other Forest Resources Management" has an increase of $0.2 million in support of wildlife habitat management and recreation resources management. A decrease is requested of $0.3 million in "Timber Management" and $0.2 million in "Reforestation and Forest Development". These small decreases however, are more than offset by the anticipated carryover of "Excess Receipts" funding which was appropriated in the 1990 Appropriations Act. "Resource Management Planning" is decreased $1.0 million to $1.1 million due to what was originally a planned reduction of intensity in effort in the planning process.

Other significant changes from the 1991 base in the O&C Grant Lands Appropriation include a decrease of $0.5 million for **Western Oregon Information and Resources Data Management**. The decrease in "Data Systems Operation and Management" is a result of the anticipated reduced level of support needed for the planning effort. Within the **Western Oregon Construction and Acquisition** account, an increase of $0.4 million is proposed in "Construction" for the survey and design of the Dean Creek Elk Viewing area in western Oregon. This project supports the goals of "Fish and Wildlife 2000" as well as "Recreation 2000".

LAND ACQUISITION

An appropriation of $24.3 million is requested for **Land Acquisition** which is an increase of $11.7 million over the 1990 appropriated level. This increase supports the acquisition of land in 31 areas, all of which support the President's **America the Beautiful** Initiative. Twenty-six of these acquisition projects contain biologically valuable wetlands or riparian habitat indicating greater weight given to these types of projects for 1991. Twenty-three of the projects contain endangered species habitat.

CONSTRUCTION AND ACCESS

Included in this account are requests of $7.5 million for "Construction" projects and $1.4 million for "Access and Easement Acquisition". The increase in construction funding will support seven projects associated with the **America the Beautiful** initiative, six projects in support of the **Maintaining Infrastructure - Legacy 99** Initiative and one large project in support of BLM's "Recreation 2000".

PAYMENTS IN LIEU OF TAXES (PILT)

The 1991 budget includes $105.0 million for "Payments In Lieu of Taxes", the same level as in 1990, which provides payment to local governments that have Federal lands within their jurisdictions.

FIREFIGHTING

The "Firefighting" account which includes fire program funding for the 4 Department of the Interior land management bureaus is proposed at $165.6 million which is $0.9 million below the 1991 base. This is a $144.1 million decrease from 1990 adjusted appropriations, an amount which represented a one-time repayment of 1989 emergency fire transfers. Beginning in 1991, there will be no need to have repayments of prior year transfers as the account funds all fire costs "up front", including fire management, presuppression, suppression and emergency rehabilitation. The BLM's portion of this request is $98.2 million, a $0.6 million reduction from the 1991 base.

RANGE IMPROVEMENTS

The requested level of $10.2 million in the "Range Improvement" program is an increase from the 1991 base of $0.6 million. Emphasis will continue to be focused on improving riparian habitat areas for multiple use. The Range Improvement Appropriation as well as the receipt estimate reflect the changed grazing fee of $1.81 which went into effect March 1, 1990.

SERVICE CHARGES, DEPOSITS, FORFEITURES

The $6.0 million estimated level for the **Service Charges, Deposits and Forfeitures** account, is the same as the estimated 1990 level.

MISCELLANEOUS TRUST FUNDS

The estimate for current appropriations for "Miscellaneous Trust Funds" is at $0.1 million, the same as the estimated 1990 level.

MISCELLANEOUS PERMANENT APPROPRIATIONS

The estimated 1991 level of the **Miscellaneous Permanent Appropriations**,is $153.7 million, which is an increase of $18.8 million over the 1991 base. This increase is primarily due to a higher level of payments to the O&C Counties as result of an increased level of revenue from western Oregon timber sales because of higher market prices. Miscellaneous Permanent Trust Funds are estimated at a level of $0.6 million.

Other accounts in BLM's budget include the permanent appropriations for "Special Acquisition of Lands and Minerals" and "Quarters Maintenance", both continuing at the 1990 level.

BIOGRAPHY OF CY JAMISON

Residence	Washington, D.C., and Billings, Montana
Place of Birth	Billings, Montana
Date of Birth	April 12, 1949
Marital Status	Single
Education	B. S. Secondary Education: Major Social Science Minor Earth Science Eastern Montana College, 1971, Billings, Montana

Career Summary

1985 - 1989	**Legislative Advisor on National Parks and Public Lands Subcommittee, Committee on Interior and Insular Affairs, U.S. House of Representatives.**
1984 - 1985	**District Field Director for Congressman Marlenee, Congressional Field Office, Billings, Montana.**
1983 - 1984	**House Liaison for the Secretary of the Interior, Office of the Secretary, Department of the Interior, Washington, D.C.**
1981 - 1983	**Republican Consultant on Oversight and Investigations Subcommittee, Committee on Interior and Insular Affairs, U. S. House of Representatives.**
1980 - 1981	**Legislative Affairs Specialist, BLM Montana State Office, Billings.**
1978 - 1980	**Youth Program Manager (YCC & YACC), BLM Montana State Office, Billings.**
1976 - 1978	**Employee Development Specialist, BLM Montana State Office, Billings.**
1974 - 1976	**Public Affairs Specialist, BLM Montana State Office, Billings.**
1973 - 1974	**Public Affairs Specialist, Field Office of the Secretary, Department of the Interior, Denver, Colorado.**

Montana Business and Community Activities

— City Council Member, Billings (largest city in Montana - 80,000 plus population).
— Schrojam Properties: I own half interest in several residential/commercial properties in Billings.
— Member, Board of Directors, Federal Employee Credit Union.
— Past President of Billings Breakfast Exchange Club.
— President-elect, Yellowstone District (Montana, Idaho, Wyoming, Alaska) Exchange Clubs.
— Vice-President, Eastern Montana College Alumni Association.
— Chairman, Community Development Commission (Appointed by Mayor).
— Federal Coordinator, United Way (1979).
— Member, Community Development Commission (Appointed by Mayor).
— Member, Billings Area Chamber of Commerce.

BIOGRAPHY OF MEL BERG

POSITION: Chief, Division of Forestry, Bureau of Land Management

OFFICE: Bureau of Land Management, 18th & C Sts. NW, Washington D.C. 20240, Telephone: (202) 653-8864

EDUCATIONAL BACKGROUND:

Bachelor of Science, Forest Management, Iowa State University, 1962

WORK EXPERIENCE:

Bureau of Land Management

- Chief, Division of Forestry, Washington D.C., 1989 to present
- District Manager, Roseburg Oregon, 1984 to 1989
- Associate District Manager, Roseburg Oregon, 1980 to 1984
- Natural Resource Specialist, Washington D.C., 1977 to 1980
- Area Manager, Riverside California, 1976 to 1977
- Realty Specialist, Riverside California, 1973 to 1976
- Access Specialist, Roseburg Oregon, 1971 to 1973
- Forester, Roseburg Oregon, 1965 to 1971

BIOGRAPHY OF J. DAVID ALMAND

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EDUCATIONAL BACKGROUND:

MS Wildlife Management, University of Georgia, 1965

BS Forestry, Major in Wildlife, University of Georgia, 1963

WORK EXPERIENCE:

U.S.Department of the Interior

- Chief, Division of Wildlife and Fisheries, Bureau of Land Management, Washington DC, 1986 to present
- Special Assistant (Non-toxic shot issue) to the Associate Director of Wildlife, U.S. Fish and Wildlife Service, Washington DC, 1984 to 1986
- Project Manager for National Planning, U.S. Fish and Wildlife Service, 1982 to 1984
- Assistant Chief, Division of Wildlife, Bureau of Land Management, Washington DC, 1975 to 1982
- Fisheries Management Biologist, Bureau of Land Management, Washington DC, 1974 to 1975
- Assistant Refuge Manager, Piedmont National Wildlife Refuge, U.S. Fish and Wildlife Service, Round Oak, Georgia, 1963 - 1964

Other

- Fisheries Extension Specialist, National Marine Fisheries Service, NOAA, Dept. of Commerce, Washington DC, 1970 to 1974
- Extension Wildlife and Fisheries Program Leader, Extension Service, USDA, Washington DC, 1969 to 1970
- Extension Wildlife Specialist, Cooperative Extension Service, University of Georgia, 1965 to 1969
- Assistant County Agent, Cooperative Extension Service, Jefferson, Georgia, 1964 to 1965

OIL AND GAS INSPECTION PROGRAM

Senator Reid. Thank you, Mr. Jamison. The Washington Post of April 24 contained a news article, titled, "Study Says U.S. Losing Millions in Oil Revenue." The article claimed that the Federal Government is losing about $400 million a year in royalties, because oil companies are inaccurately reporting their withdrawals.

The article said:

> Recent investigations by the General Accounting Office and Interior's own inspector general, have accused Interior's Bureau of Land Management of failing to verify adequately production figures provided by energy companies, lax enforcement of criminal penalties and weak environmental regulation among other problems.

On page 40 of your budget justification you cite the recent reviews of the oil and gas inspection program, which have been conducted by the General Accounting Office, the Office of the Inspector General, and the Senate Select Committee on Indian Affairs.

In each of these reviews, the Bureau of Land Management has been criticized for deficiencies in the intensity and diligence of its on-site inspections. These criticisms of the inspection program are cited as justification for the $447,000 and 12 full-time equivalents increases in the oil and gas program.

Would you explain briefly the problems that were found and the impacts, and how you plan to address these criticisms, and what is the timeframe, and will these 12 full-time equivalents help?

Mr. JAMISON. The answer to the last question, Senator, is that the 12 full-time employees that are put in what we call the I&E Program, or inspection and enforcement, will be a step in the right direction. One has to keep in mind that this is a very technical field that is operated in an oil patch, and we have to bring these folks on and train them, and usually they don't really become productive until their second or third year on the job.

So, it is kind of a slow buildup process. I agree with you, of course, that there is a need for additional inspection, and we have increased our inspections, especially on Indian leases that we were criticized for on the Subcommittee on Indian Affairs report. We will do inspections annually now instead of sometimes every third year, and we hope that will alleviate some of the concerns from the Indian community.

I still think that overall we have two real inspection areas in oil and gas, and we just can't let one overrun the other. One area to look at is revenue production, and that was highlighted in the article that you quoted from.

That is one area that we will look at, and will continue to look at and follow up as best we can. The other area, I think, where we have to do a better job in also is environmental compliance out at the oil and gas sites themselves.

Let's make sure that the pads are operating properly and there is no discharge of hazardous materials, and the cleanup of the sites is properly handled. Also, the third thing is when the oil fields are played out, or abandoned because of economic reasons, we have to make sure that they are properly cared for.

So, we are getting pushed in two directions. The energy strategy says that we have to keep as many well holes open as we can for future enhanced recovery, and the other side of the equation says we should plug off as many as we can.

So, with all that in mind, I think we are making a small step in the right direction.

PLANNED LEVELS OF INSPECTIONS

Senator REID. Do you know how many outside inspections are planned for this year?

Mr. JAMISON. The range is between 12,000 and 13,000 inspections per year.

Senator REID. And what do you hope to be able to do next year?

Mr. JAMISON. Well, I hope we can ratchet that up to around 16,000 inspections.

Senator REID. And as a result of your increased inspection activity, do you expect any increased revenue?

Mr. JAMISON. I would hope so, and in fact, we have some cases that are ongoing where more diligence has paid off, and we hope to get some increased revenue, mainly in the gas area.

Senator REID. Does BLM have penalties to discourage fraud?

Mr. **Jamison**. Yes; there is adequate authority on the books to penalize those that abuse the system. I would like to also state, Senator, that the vast majority of operators do a good job, and are honest and reputable individuals and companies.

And the few bad apples, and as I told them, that if they are habitual offenders, let's throw the book at them and we will get as much revenue out of them as we can.

THEFT OF OIL

Senator **Reid**. I would like to quote from a report of the Senate Select Committee on Indian Affairs.

> The committee found that simple smash-and-grab theft, stealing entire tankfuls of crude oil by force, rarely occurs; but sophisticated and premeditated theft by mismeasuring and fraudulently reporting the amount of oil purchased has been the practice for many years of the largest purchaser of Indian oil in the United States and others * * *.

The report goes on to explain that the Department of the Interior has knowingly allowed this practice to continue, and describes the fraudulent methods used by Koch Oil and others to acquire more oil than paid for.

From 1981 to 1989, the total amount of BLM recorded oil theft for Oklahoma, and that is for a period of 8 years, was a little over $20,000; almost nothing.

By contrast, the special committee uncovered millions in oil theft after only 2 months of investigations. The deficiencies of your Inspection and Enforcement Program are cited throughout the committee's report.

Would you please comment on the inadequacies of your Inspection and Enforcement Program that allowed Koch Industries to steal literally millions of dollars at the expense of Indian owners?

Mr. **Jamison**. Excuse me, Senator, but it is pronounced Coke Oil, and it is mainly operated in Oklahoma, but they have leases or interests in leases for production in approximately 950 areas.

We have inspected some prior to the Indian select committee report, and the majority afterward. We inspected, and we went back through the records, and we went with our friends over at MMS, and called up the data there, and we have not found the big smoking gun that was identified in the select committee's report.

We are still looking, and we are still continuing to look. We are making special efforts, especially in the gas area, to follow up to see if there is anything, but I agree with you that a lot of it is perception out there, and in my opinion we have not done a good job.

I think we have done some follow-up work, especially on Koch Oil, and if there is a smoking gun there, we will keep looking, but we have not found it.

MINING CLAIM HOLDING FEE PROPOSAL

Senator **Reid**. If I could turn your attention to the proposal to establish a new mining claim holding fee of $100, that is in the President's budget, and in some proposed legislation.

Prospectors, and miners from all over the West will be penalized even though there are other fairer ways to lower the deficit. It is the contention of much of the West that the 1872 mining law should not be changed.

As we know, for over 100 years this mining law has worked, and it has created a lot of jobs in the West. All over the West local governments receive millions of dollars in taxes and fees, the State of Nevada alone receives some $40 million.

In Nevada, just one of the western States, there are 20,000 people who hold claims. Those holders include professionals and those who prospect for recreation.

There are pupils and teachers all over Nevada, and all over the western part of the United States that count on these mine revenues for things that improve schools. So, I would like to know what is being done by the administration to fulfill that request in the President's budget to implement that $100 tax?

Mr. **Jamison**. Well, that proposal was forwarded up to Congress as a part of the entire President's fiscal year 1991 budget. We felt that it had some positive notes to it. One, the mining laws, as you are well aware of, require 100 dollars' worth of work annually in order to meet their assessment work requirement.

We felt that for environmental reasons and for other reasons that rather than having them go out and turn over dirt or whatever to meet that 100 dollars' worth of work, that it might just be better for the miner to just pay the $100 up front.

Second, we felt that this would also weed out some mining claims held for just speculative purposes, and open up additional public lands for the folks who really and truly intended to be mining operators.

There are about 1.2 million mining claims throughout the United States now. We anticipate, and this is just an estimate, that that number would drop to around the 900,000 mark with the implementation of the $100 fee.

Also that fee would fund our mining law administration program, and other programs in the mining area, and return to the Treasury some $70 to $80 million. That is the intent.

HOLDING FEE PROPOSED LEGISLATION

Senator **Reid**. Is there anything being done to actually bring about the new fee? It is my understanding that to collect that $100 per claim there must be legislation?

Mr. **Jamison**. That is correct, and it has to be done with legislation.

Senator **Reid**. I don't know of anyone over here in the Senate who is clamoring to introduce that. I know that Senator Bumpers wants to change the 1872 law; and on the House side, I have spoken to Congressman Rahall, who is the chairman of the Interior Subcommittee on Mining and Natural Resources, and I don't think a bill to amend the 1872 mining law is moving.

Have you seen any movement in the legislation?

Mr. **Jamison**. No; our anticipation was that this would be handled in the appropriations bill.

Senator **Reid**. Welcome to the committee, Senator McClure. Would you like to proceed for a while?

Senator **McClure**. No; go ahead. Thank you.

LANDS AND REALTY PROGRAM CASEWORK

Senator **Reid**. Nevada is the most rapidly growing State in the Nation. The Las Vegas metropolitan area, for example, is growing at a rate of 4,000 or 5,000 people a month, and it has come to my attention that because of this significant growth the Bureau of Land Management is simply unable to keep up with the case work demands in the lands program; a program that is obviously critical in a State where 87 percent is federally owned, and 69 percent of the land is administered by the Bureau of Land Management, your agency.

For example, the Bureau's Las Vegas District has a backlog of some 300 lands cases, ranging from simple rights-of-way—and when we say simple, they are not simple if you are the person involved with the problem—to very large land exchanges, like the St. Mary's exchange, involving Elko to Clark Counties.

In addition, it is my understanding that bureauwide that there are over 2,300 realty occupancy cases pending and up to 90 landfills leased under the Recreation and Public Purposes Act that are potentially in noncompliance.

While this program may not have the flash and appeal of other more visible programs and initiatives, I believe it is imperative that we provide this service to the public in a timely manner.

Mr. Jamison, what will the budget request before us today do to promote the timely resolution of backlogged cases in my home State of Nevada and the Nation in general?

Mr. **Jamison**. First, in summary, I think that the lands and realty program is probably one of the least understood programs and does not generate that much public interest.

But whether it is your wildlife activities, or recreation activities, you end up having to do some kind of a land case with it. Regarding our county, Nevada's Clark County, I transferred about $300,000 in fiscal year 1990, basically reallocated it within the Bureau, to that area because we have such a backlog there.

I just think that we need to move forward on this, because if we don't, I think the backlog is going to grow, especially when it is tied up with the Endangered Species Act.

We asked for and got an increase via the President's budget of about $950,000. That is going to be a step in the right direction, but a very small step.

Senator **Reid**. Do you know how many cases are added each year in this category?

Mr. **Jamison**. I guess I can't estimate that, but I would say that it is at least 300 just in your area.

MARY'S RIVER EXCHANGE

Senator **Reid**. We turn now to a controversial land exchange in Nevada, the Mary's River exchange. Tell us what is happening on that?

You know, I get letters every day and people think it is the greatest thing in the world, and I get letters every day and people think it is the worst thing in the world.

I had some people in my office today who felt that it was a terrible idea, but, you know, it is a mixed bag. So, tell me what is happening.

Mr. **Jamison**. Mr. Insalaco, who is the private individual who is promoting that exchange, and that exchange involves some land that was proposed, along with the Mary's River, near Elko, NV.

I told Mr. Insalaco when he started the project that if he had the full support of both local governments, on both the receiving end and the giving end, I said that I would be in favor of moving forward with this.

The county of Elko, and I don't agree with the county on that, has passed a resolution against it. The same thing has happened down in Clark County, where the supervisors have passed a resolution against it there. I just said that exchange is on hold until the local governments come to an agreement on it, or something else happens that changes that fact.

That has not happened, and so as far as I am concerned, the exchange is on hold in the Bureau. I think it is important, and as you said before the Bureau of Land Management manages in the high 60 percent of your State, that when we take private lands and place them in public ownership in some counties that are mostly or generally in Federal ownership, like in Elko, that causes me concern.

Senator **Reid**. What is the status of the environmental assessment?

Mr. **Jamison**. Senator, the way I understood it is that Mr. Insalaco, with our guidance, has prepared an environmental assessment of the exchange.

Senator **Reid**. When might that be ready?

Mr. **Jamison**. I understand that is coming close to being finished now. I don't know the exact date.

WILD HORSE AND BURRO POPULATION

Senator **Reid**. Mr. Jamison, current estimates place the Bureau's wild horse and burro population at 41,775 horses, and almost 5,000 burros, with approximately 31,000 of those horses, or 74 percent, and about 26 percent of the burros being in Nevada.

The BLM has requested in their justification that there be a removal of about 8,500 of these animals, and that would be necessary to hold the population static, which is still 15,000 animals above the identified carrying capacity of the land.

In 1985, the Congress directed the Bureau to remove a specified number of animals to help the agency's attempt at reaching an appropriate management level. Would such congressional action be prudent or advisable in the present situation, if in fact we could get it?

Mr. **Jamison**. I guess I would just have to see the exact language. I think it would also need some help. Senator, the most frustrating program that I have had down at the Bureau has been the wild horse and burro program.

One, it has people on each side of the spectrum. On one side are the animal rights protection groups. I also have to look at the other side of the spectrum if the horses are eating themselves out of house and home, especially in Nevada where you have very fragile range conditions.

We are not going to meet our goal of removals this year. Our program is slightly out of balance. We had a meeting just the other day, and in one instance we have a place to put the horses once we remove them; basically we have been putting them in sanctuaries, in the prison program, and up for adoption.

We can handle the horses that are coming off the range, but those costs are running a little ahead of what we anticipated, and so now the other side of the program is out of whack because we planned most of the money for disposition, and now we are going to have to move the money from removals.

Somehow, I have to get that program balanced back up where we have the ability to remove the horses and have a place to put them when we get them out.

WILD HORSE SANCTUARIES

Senator REID. How are the sanctuaries working?

Mr. JAMISON. The sanctuaries are for the care of the horses that are unadoptable, and they work very well, but they are also very expensive. We have two up and operating. That is all we anticipate having. We have one in South Dakota, and one in Bartonsville, OK, and they have been very well run.

I personally have a feeling though that they are not going to be able to be self-funded at the end of 3 years.

Senator REID. But even if they weren't, and I just throw this out as a question more than an answer, but even if they weren't, it would still be cheaper than keeping them where we have in the past, would it not?

Mr. JAMISON. I would say if we had any choices, I would rather go with the sanctuary than just warehousing them down in some BLM corral. I agree with that, Senator.

WILD HORSE FERTILITY STUDIES

Senator REID. The other question I have is that the experiment that was started, I understand, has not been successful at all; that is, the fertility control study, which was done by the University of Minnesota.

Everything that I have read about that has been negative. I have read that animals have been abused. I don't think that anything positive came out of that study. If it did, can you tell me what positive things came out of those studies?

Mr. JAMISON. I am not as negative as you are, Senator, and the research is not quite complete. The National Academy of Sciences still has to issue a final report on it. One of the things that we are going to try to do is return some horses to the range. We are actually going to neuter the males, or actually plant a hormone device in the mares.

We feel that will take them through the breeding cycle. Horses can breed, from my information, up to about 15 years of age. I guess that this approach to fertility is proper, and we feel that this approach is controllable and is feasible, and we are going to try some experiments on with it.

Senator **Reid**. I think that one of the problems with the program, and I am not alone in this, is that the program was operated by people from Minnesota. I mean, I can't think of a site with more logistical problems, than perhaps the University of Maine.

We, of course, would like to use the University of Nevada system. But that failing, I would say that we should use Nevada, Idaho, Utah, or somewhere that is closer than Minnesota, to study the wild horse issue in a humane fashion.

I think that we are going to continue work in that area, which perhaps we should, because it may be a possible solution to the whole problem. I would hope that we would use western based universities to do the work, because they are certainly capable of doing it.

Mr. **Jamison**. I tend to agree with that.

TRANSFERS OF HORSES TO UNDERDEVELOPED NATIONS

Senator **Reid**. We have a number of other questions that I will submit to you in writing, dealing with these animals, including underdeveloped nations that have expressed an interest in these wild horses.

Mr. **Jamison**. May I comment on that, Mr. Chairman?

Senator **Reid**. Please.

Mr. **Jamison**. The Secretary has a personal interest in that, and he spoke to several heads of state on this. We think that it would take legislation, and we are looking at the details on that right now.

One of the things is a site for storage, and we are speaking of alternatives. The Secretary spoke to the President of Mexico about it, and he said that we have some wild horses, and that they would be just as important to economically depressed areas as a pickup truck.

And the President of Mexico said back, well, Mr. Secretary, what we really need is mules; and our Secretary said back to him, he said that I will give you the ingredients. [Laughter.]

I think though we are heading in the right direction.

Senator **Reid**. Senator McClure.

WILD HORSE SANCTUARIES—SELF-SUFFICIENCY

Senator **McClure**. Thank you very much, Mr. Chairman. I might just pick up on the wild horse and burro program, because I am interested, and have hoped that the sanctuary proposals would be successful.

I think that you said that you have a doubt as to whether or not they were going to be self-sustaining at the end of 3 years. Now, what is that doubt based on?

Mr. **Jamison**. I met with—and I forget the gentleman's name that runs the sanctuary in Idaho, but he is very hardworking, and he is trying his darndest to raise the money to meet the 3-year goal, but he is having a very difficult time.

Senator **McClure**. Hyde is his name.

Mr. **Jamison**. Yes, Mr. Hyde, and he has made some progress, but in my looking at the fundraising, whether it is political or otherwise, he has a long way to go yet. I assume that at the end of the

3 years he may not meet that goal. I am still hoping that he will, but I don't think so.

Senator McCLURE. Well, the reason that I am taking the time to go into that a little bit is that there are a lot of people who are interested in the preservation of the wild horses and burros. A great many of them were in favor of, or rather have been favorably impressed by, the conditions under which they are maintained in the sanctuary program.

If those people are really interested in the welfare of the wild horses and burros, and don't find the other alternatives very appealing to them, it seems to me that they ought to put a little bit of muscle behind the efforts to raise the money necessary to provide the funding for this program.

Mr. JAMISON. I concur 100 percent.

Senator McCLURE. Mr. Hyde has convinced me that he really does have the welfare of the animals in mind, unlike some of the other people who merely provided custodial care with no real concern for the animals. We have had bad experiences with that.

It seems to me that the sanctuaries, under the management of people like Mr. Hyde, and not necessarily just Mr. Hyde, have a great deal of promise, and I would hate to see that promise aborted at the beginning because of the failure of funding.

Now, I am not unwilling to look at exactly what the chairman said in terms of comparative costs, but I had assumed, perhaps naively, that people who really cared were going to get behind Mr. Hyde and his efforts, and that we would find that to be a successful program, and we would find the alternative that we have all been looking for.

But I don't think, Mr. Director, that the answer lies in leaving them on the public range.

WILD HORSE POPULATION MANAGEMENT

Mr. JAMISON. We can, Senator, but it just does not make good management sense. The horses take a lot of forage, and I just think that with the numbers, especially in Nevada, that we have to get those numbers under control, if we are going to have a good, viable program. The program is three-pronged.

We have to have forage for wildlife, and we have to have forage for domestic livestock, and we have to have forage for horses. You cannot let that get out of balance, but it is in Nevada, especially in the wild horse area.

Senator McCLURE. Well, we have said that so often in this committee, and with witnesses of all kinds before this committee and the authorizing committee, that it goes beyond any argument as far as I am concerned.

You have got to get those horses off the public range or control those numbers, and you can't leave them on the range and control their numbers without taking biological controls; is that correct?

Mr. JAMISON. That is correct, Senator.

Senator McCLURE. And you can't remove them as fast as they multiply.

Mr. JAMISON. We have estimated that the population is going up at least between 17 and 26 percent a year.

Senator **McClure**. In spite of our removal programs, we have not been able to match that.

Mr. **Jamison**. That is correct, Senator.

Senator **McClure**. So, the problem does not go away, and it doesn't benefit from benign neglect.

Mr. **Jamison**. It gets worse.

Senator **McClure**. It gets worse, and the people who want something done on behalf of the horses and burros are going to have to help find that solution, and if they are unwilling to help find the money to fund it, then the alternatives come up.

One of the problems you have with the foreign country disposal question is the requirement in current law that we guarantee their safety and well-being for a period of time after the ownership, or after the possession is transferred; is that not correct?

Mr. **Jamison**. That is basically the stumbling block right now. We could send veterinarians down to monitor the horses. There are a lot of things that we can do. We can't let the problem get out of hand though.

I think that we ought to take a good hard look and an open look, and look at it realistically.

TIMBER RECEIPTS

Senator **McClure**. Let me turn for the moment to the question of timber receipts. The fiscal year 1990 budget estimated that timber receipts for fiscal year 1989 would total $185 million. The fiscal year 1991 budget indicates that the actual amount of timber receipts is $253 million.

A similar increase can be found comparing the fiscal year 1989 estimate to the actual receipts. What is causing the discrepancy? Is it the bid prices, or the amount of volume of timber harvested?

Mr. **Jamison**. I think that I would like to refer that question over to Mel Berg, the Chief of the Division of Forestry.

Mr. **Berg**. You are speaking of the receipts on the PD side, or the——

Senator **McClure**. On which?

Mr. **Berg**. You are speaking of the total forestry program?

Senator **McClure**. Yes.

Mr. **Jamison**. He wants to know if it is on O&C, or PD?

Senator **McClure**. This is the total.

Mr. **Jamison**. Let me take a shot at it. One is if you just took it and coupled it in with the O&C. We have had prices out there skyrocket, Senator.

Senator **McClure**. But, this occurred even before prices were skyrocketing; is that not correct?

Mr. **Jamison**. I think that there has just been a general trend upward.

Senator **McClure**. All right. That is what I am getting at. Are you getting more per stump?

Mr. **Berg**. The bid price went up largely because of the owl situation in western Oregon.

Senator **McClure**. Well, is that the reason that the receipts are rising?

Mr. **Berg**. The receipts are probably going up because of that increase.

Senator **McClure**. Well, I don't want a probably. I want to know.

Mr. **Jamison**. The volume has not gone up, Senator.

Mr. **Berg**. The volume is the same, but the price has gone up.

Senator **McClure**. All right. That is the easy answer if it is indeed correct. Is that correct?

Mr. **Berg**. That is correct.

Senator **McClure**. Volume has not gone up?

Mr. **Berg**. We are selling the same amount of volume.

Senator **McClure**. Can you give me the exact figures on volume harvested as compared to the estimates on fiscal year 1991 from 1988, 1989, and 1990 budget years, please?

Mr. **Jamison**. We will get that for you, Senator.

Senator **McClure**. I want the estimates of receipts and the actual receipts, and I want to know where they differ.

Mr. **Jamison**. They are going to be higher.

Senator **McClure**. They would be higher, but I want to know why.

Mr. **Jamison**. We will get that information for you, Senator.

Senator **McClure**. OK. Thank you.

[The information follows:]

OREGON AND CALIFORNIA GRANT LANDS RECEIPT ESTIMATES CONTRASTED WITH ACTUAL COLLECTIONS

[In millions of dollars]

Year of collection	President's budget estimate	Actual collections
Fiscal years:		
1987	1988—156,600,000	152,782,000
1988	1989—162,900,000	241,008,000
1989	1990—165,800,000	253,281,000
1990	1991—272,000,000	[1] 119,413,000

[1] Collections in 1990 for first 6 months only.

TIMBER RECEIPTS

Senator **McClure**. I note that the fiscal year 1991 budget indicates that the estimate of timber receipts has risen to $272 million for fiscal year 1990, and $314 million for fiscal year 1991. While that is not a big increase from the fiscal year 1989 actual, it is a big increase from the fiscal year 1989 estimate.

Now that we are halfway through the fiscal year, will the actuals beat the estimates?

Mr. **Jamison**. I am told that based on our projections it will be fairly close.

Senator **McClure**. Then prices have not gone up?

Mr. **Jamison**. You have to look at where the volume is first.

Senator **McClure**. Then volumes are going down?

Mr. **Jamison**. There are three factors there, Senator, and I guess we will have to get that for you, sir.

Senator **McClure**. If you would, please.

[The information follows:]

FACTORS USED TO ESTIMATE TIMBER RECEIPTS 1990 AND 1991

Following are some of the assumptions (factors) that were considered in the development of timber receipt estimates for 1990 and 1991:

A single year's receipt collection is more of a function of the previous several years' bid prices than it is the current year's sale price.

Timber sale contracts are awarded for up to three years in duration and collections for any given timber sale may span 4 fiscal years.

Payments on timber sales are made with an up-front deposit and incremental payments are made when the logs leave the contract area.

An anticipated rate of harvest and removal is assumed as well as an average value of the removed timber which consists of a mix of sale values from previous years as well as the current year.

The trend, which has been exhibited over the past few years, of the harvest volume exceeding the sale volume will continue through 1991, at which time the market will stabilize. This trend has reduced the amount of sold but unharvested timber and has had a tendency to also escalate the sale value because of the reduced supply of available timber.

The current restrictions on log exports will continue.

The chaotic nature of the market due to the uncertainties of timber supply due to numerous factors, such as the spotted owl, has manifested itself into a situation where the receipt collections have almost doubled since 1987 but the average sale volume has declined. The high level of receipt collections has resulted primarily from the high rate of removal that has exceeded the average sale amount, thereby depleting the readily available supply of harvestable timber. This factor, coupled with the future uncertainties of timber supply, has also resulted in a marked increase in the average sale prices of timber.

PRODUCING OIL AND GAS LEASES

Senator McCLURE. As a result of the recent increases in oil and gas prices, BLM has 2,000 more oil and gas leases in a producing status than there were 1 year ago, or up 11 percent.

Generally, where are these additional leases located?

Mr. JAMISON. From what I am told, there are not that many additional producing wells out there, and there has actually been a recounting, and we have come up with a more accurate figure.

The only place that we see increases for oil and gas is from coal bed methane.

Senator McCLURE. Then the figures that appear on page 36 of your justification are not accurate?

Mr. JAMISON. Senator, I will let Mr. Hildebeidel answer that.

Mr. HILDEBEIDEL. On page 36 of the justification?

Senator McCLURE. Yes.

Mr. HILDEBEIDEL. Which number are you referring to?

Senator McCLURE. Well, the figures that you show on page 36 of your justification indicate that you have 2,000 more oil and gas leases in a producing status than there were 1 year ago.

Mr. HILDEBEIDEL. My understanding is that this figure is a correct figure based upon a better data base that we now have in place, and it is a more accurate count of the number of wells and leases.

Senator McCLURE. OK. Which figure is more accurate?

Mr. HILDEBEIDEL. The one that is in the justification, and it really is not an increase in production. It is just that we have a better count on the number of producing leases that we are working with now than we did before.

Senator McCLURE. So, it is not the current figure that is inaccurate. It is the figure that was used before?

Mr. HILDEBEIDEL. That is correct.

STRIPPER WELL POLICY

Senator **McClure**. As a result of the decline in oil prices during 1986, the BLM took several steps with regard to the probable shutting-in of stripper and marginal wells. Instructions were issued to allow lease suspensions, for a period not to exceed 1 year on leases with shut-in wells, without the operator losing the lease. The policy was designed to prevent the premature abandonment of oil and gas resources due to price fluctuations.

The budget indicates that this policy has been extended through May 1990. How successful has this effort been?

Mr. **Jamison**. That is correct, Senator. I think it is the wise thing to do. We need to keep the opportunity available in case we get more production and the price goes up. We have one side of the faction telling us to keep those wells closed, and then the other side tells us to keep as many holes open as you can for the future. I am on the side that we should keep as many open as we can and as many opportunities out there as we can.

Senator **McClure**. Now, if I understand the answer to the previous question with respect to the numbers of producing wells, we can't really look at that number to determine whether or not there has been any success in your stripper or marginal wells program?

Mr. **Jamison**. Absolutely.

OILSPILLS

Senator **McClure**. A national environmental organization recently released an analysis which estimated that there have been 10,000 oilspills which have occurred since the *Exxon Valdez* ran aground over 1 year ago. Most of these spills, however, were not near any national parks, and I don't believe that they were near any Federal lands or waters either. Have you analyzed that report?

Mr. **Jamison**. No; we have not, Senator. We have not taken a look at it yet.

Senator **McClure**. One of the three central points made by the group is that there must be stronger incentives for the oil and shipping industries to extract, transport, and refine oil more safely. Do they have a point?

Mr. **Jamison**. That is a goal I would promote any time I had a chance but I don't know where they are coming from, so I can't comment on that.

Senator **McClure**. Well, if we can indeed have stronger incentives, what are we doing to increase those incentives?

Mr. **Jamison**. We have not done anything.

Senator **McClure**. I mean about the oilspill question? Are we really gaining, or can we gain on oilspills by giving them more incentives?

Mr. **Jamison**. I need to be convinced.

Senator **McClure**. Excuse me?

Mr. **Jamison**. I need to be convinced, Senator. I don't know at this time.

COMPLIANCE ON ASSESSMENT WORK

Senator McClure. The Chairman has already gone into the question of the holding fee of $100 on mining claims. Would you have any objection to adjusting that to say that the claimant would have the option of paying $100, or doing the assessment work?

Mr. Jamison. Our recommendation only in the first year. It is an administrative nightmare if we have to go out and check and see whether one did it, and one that did not do it.

Senator McClure. Well, I understand that. But at the present time you have that problem with respect to all of them, don't you?

Mr. Jamison. That is correct.

Senator McClure. You either have the problem or you ignore it?

Mr. Jamison. We have done the latter.

Senator McClure. You have done the latter?

Mr. Jamison. Yes.

Senator McClure. You are ignoring it?

Mr. Jamison. Yes.

Senator McClure. And you want that answer on the record?

Mr. Jamison. We have 1.2 million claims out there, and I can't pretend that we have checked every one of them. If we get a notice of operations, we do check; and if it is a cyanide operation, we check it three or four times a year.

So, if it is an ongoing operation, we are on top of it; but to look at each individual mining claim, no, we don't.

Senator McClure. Your tendency would be to believe that if there is an operator who is today filing a false affidavit, under the alternative system he would also file a false affidavit; is that what I understand you to say?

Mr. Jamison. I guess I don't catch the meaning of that.

Senator McClure. Well, today he is required to file an affidavit of assessment work, and you are saying that you are not checking them, and therefore, you suspect they are false?

Mr. Jamison. No, Senator, they are not all false.

Senator McClure. I understand that. I didn't say that they were all false, but you are suggesting that we should go to an all fee system because we can't trust them to be honest?

Mr. Jamison. Well, that is a management tool, too.

Senator McClure. Well, it is not a management tool if all you do is catch $100, and you didn't do an inspection before, and you are not going to inspect them afterward. That is just a cash register, and it is not a management tool.

HOLDING FEE TO REDUCE SPECULATION

Mr. Jamison. We feel that a legitimate operator will pay $100 to hold the claim to do mining. He will pay the fee. But we want to get the speculators out, and we feel that this would be one way, although not totally.

Senator McClure. Well, it does not get any speculator out if he is paying $100.

Mr. Jamison. That's right.

Senator McClure. If he is actually doing this assessment work, it does not save you any money, and so he is going to continue to do just exactly what he did before if he is a speculator, and you just made it easier.

Mr. JAMISON. In some cases that would be correct.

Senator McCLURE. Now, the speculator would be encouraged to get off if as a matter of fact he has to pay the fee, and he has not been doing the assessment work.

Mr. JAMISON. That's true.

Senator McCLURE. So, the only speculator that you are getting at is the guy that is filing a false affidavit; isn't that correct?

Mr. JAMISON. That is true.

HOLDING FEE AND ASSESSMENT WORK

Senator McCLURE. Now, for the honest guy out there, what does it do to him?

Mr. JAMISON. He pays $100.

Senator McCLURE. And what does he do about the assessment work?

Mr. JAMISON. Well, he has a choice. He can go ahead and move toward actually bringing that mining claim into production, and he would be doing the work on it. If he didn't, he would be paying just $100.

Senator McCLURE. Now, if I understand you, under your proposal after the first year, the honest man has to pay $100, and if he is moving the mine toward production he also has to pay that cost.

Mr. JAMISON. Yes, sir.

Senator McCLURE. So, you are upping the ante for the guy who is the honest operator.

Mr. JAMISON. In some cases, yes.

Senator McCLURE. What do you mean in some cases? In which cases is it not true?

Mr. JAMISON. Well, if you have a guy who isn't moving toward production, and is just out there as a recreational miner, or somebody out there that has no intention of mining——

Senator McCLURE. Well, I thought we were talking about the honest guy that is really a miner.

Mr. JAMISON. OK. I would agree with you in that case.

Senator McCLURE. All right. That guy really does have a claim, really is moving toward production on the mine, and is spending money that also satisfies his assessment work. He is going to have to pay an additional $100 a year.

Mr. JAMISON. That is correct.

Senator McCLURE. Is that correct?

Mr. JAMISON. Yes, Senator, it is.

ENVIRONMENTAL AND MINERAL PRODUCTION BENEFITS

Senator McCLURE. The budget argues that this proposal will provide both environmental and mineral production benefits. It will "eliminate activities that result in surface disturbance of lands solely to maintain a claim."

What do you mean when you state that this proposal will provide both environmental and mineral production benefits? I understand what you are saying about the environmental benefit, because the person that is moving dirt just in order to keep the assessment work requirement doesn't now have to just move the dirt. He can pay $100 and leave the land alone. But, how does it help mineral production?

Mr. **Jamison**. There are occasions where in my estimation you have people that are speculating in areas just because they know that somebody else is interested in them.

They are speculating in areas just because they know that somebody else is in the same area, if you know what I mean. We would hope that this fee would eliminate some of that, but not all. That is what we would hope it would do.

Then a legitimate operator would have more land available than he otherwise would. In our estimation, it will bring the number down from about 1.2 million claims to around 900,000 claims.

Senator **McClure**. You are assuming that there is the so-called illegitimate claim then?

Mr. **Jamison**. That is correct.

Senator **McClure**. And sitting on lands that other people might take up and use to produce. And that is the basis; is that correct?

Mr. **Jamison**. Yes, sir, that is our premise.

EFFECT OF HOLDING FEE ON SMALL MINER

Senator **McClure**. Well, there are two aspects of the proposal that bother me, and I have long advocated the alternatives via paying a fee instead of doing useless assessment work—for the environmental effects as well as for the convenience of the claim holder. I believe that. But I am concerned about the effect of a small miner who barely can pay the costs of doing the development work that he is legitimately doing. And you are going to add $100 a year to that cost. That drives some of those miners off their claims, even though they are honest, and even though they are trying to move toward production. They are going to be driven out of it because many of these really are running as shoestring operations.

They don't have much money, they have a strong back and they are willing to work, and they do work, and they try hard to develop a claim because in the back of their mind they know that they are going to strike it rich. So, they gamble their life on the opportunity to prove that they can find something. There are a lot of those fellows out there and a large part of the original discoveries of mineral deposits comes from the activities of just those kinds of prospectors.

Now, you take those people out of it, and you have really hurt the mining industry in terms of free exploration location work that goes on which later a large mining company can take advantage of.

The second concern that I have is that you and I both know that mineral values fluctuate widely, and over a not too long period of time the commodity value of minerals may double, triple, quadruple, or, in the converse, be cut in half, or cut in half again.

Many miners during periods of good mineral prices are very active in looking for prospects, and when the economic prospects of mining are very low, their activity reduces.

They can't raise their own money, they can't even get anybody else to put the money in, and many of them are still grubstaked by someone else. There is no recognition in the law today and hasn't been for over 100 years, that really allows us to look at how you hold a claim during the economic downturn in the minerals industry.

The $100 holding fee eliminates some of those, who by sweat equity, would maintain their claims during that down period; isn't that correct?

Mr. **Jamison**. I would not argue with that issue.

Senator **McClure**. The fellow who goes out there and gets driven off for economic reasons because of this increased cost, who is willing to and can invest his own labor but does not have the cash, is driven off and somebody else with more money comes back on when the industry or the market improves.

As a result we are going to have, in my view, an exodus of people and then a rush back on a periodic basis. That is going to increase your workload too, though, is it not?

Mr. **Jamison**. Well, we have made our position known, and our suggestion is in the President's budget. That was our best shot to come up with something that we felt was operational, did generate revenue, and gave $78 million back to the Treasury. Maybe that is the correct way to go.

Senator **McClure**. Mr. Chairman, I have a number of questions I want to submit for the record, but let me just ask one more for the record.

Senator **Reid**. Please proceed with as much time as you need.

BOISE INTERAGENCY FIRE CENTER AND NATIONAL DISASTERS

Senator **McClure**. Thank you. In the last 12 months we have seen three major national disasters in the United States: Hurricane Hugo; the earthquake in San Francisco; and the *Exxon Valdez* oil-spill.

What interaction did the Boise Interagency Fire Center have with providing emergency assistance in the hours and days immediately following those disasters?

Mr. **Jamison**. Senator, we did not play a big role in any of those disasters, but I think that we could have, and let me tell you why. One of the things that we have is a highly trained cadre of people located throughout the United States who have had very sophisticated training on how to handle a disaster, that is, a fire.

In my opinion, that training could be translated into a Hugo situation or earthquake situations. We did become involved in the later stages of helping on some of the logistics for the *Valdez* spill. We have the best radio system outside of the military, we have the best transportation system outside of the military, and we have the best supply system.

I just think that it is an underutilized resource that we have. Somehow I think it should be hooked into the National Emergency Response System, because I think that we could do more.

I think in your home State, the Boise Fire Center is underutilized.

Senator **McClure**. Now, if I recall correctly, you have three major fire centers in the Nation; is that correct?

Mr. **Jamison**. One in Fairbanks, one in Boise, and one in the Southwest, which is run by the Forest Service.

Senator **McClure**. There is a third fire center, and you have two of them?

Mr. **Jamison**. Right.

Senator **McClure**. You don't fully utilize those 12 months of the year, and they are fire control centers?

Mr. **Jamison**. That is correct.

Senator **McClure**. To respond to fire emergencies on public lands?

Mr. **Jamison**. That is correct.

Senator **McClure**. What I am suggesting is that maybe there is a way to utilize that facility to respond to other emergencies to which the Federal Government responds to as well.

In those instances, and they are very recent in our history, did you run into constraints on your ability to provide assistance?

Mr. **Jamison**. We have a good relationship with FEMA, whose role is to pick up immediately on a disaster. I think that we could have a more appropriate role, because we are really only authorized under law to do certain things, unless the President actually calls us out to cover a disaster.

I think for the *Exxon Valdez* spill, we should not have to have a Presidential proclamation, or a proclamation of a state of emergency so that our services could be used. We don't feel that is necessary.

Senator **McClure**. Could you provide for the subcommittee an assessment of the achievements of the Boise Interagency Fire Center during those other types of emergency operations?

Mr. **Jamison**. I would be pleased to do so, sir.

Senator **McClure**. And, maybe some suggestions as to how we might organize it to make better use of those facilities and that expertise?

Mr. **Jamison**. Of those facilities and those highly trained people; yes, I would be glad to.

Senator **McClure**. And finally, Mr. Chairman, there are obviously a number of questions to be asked with respect to the so-called spotted owl controversy. So much has been said about it, and it would take so much time to get into that, so I will submit questions along with questions on other subjects.

[The information follows:]

USE OF BOISE INTERAGENCY FIRE CENTER DURING NATIONAL EMERGENCIES

In the past few years BIFC support for responses to national disasters such as oil-spills, earthquakes, volcanic eruptions and hurricanes has been increasing. BIFC has the capability to coordinate support for disasters other than wildfire when reimbursable agreements exist with other Federal agencies. These agencies would order equipment, supplies, services and personnel from BIFC through the established dispatch/coordination system and would be responsible for billing of any state or local entity requiring support. BIFC will be able to continue to provide limited support to other lead agencies in the area of non-fire disasters without jeopardizing its primary fire support coordination role.

The following resources would normally be available and coordinated through the National Interagency Coordination Center at BIFC: Communications equipment and support; food service and showering facilities; supplies (rations, sleeping bags, tools, etc.); transport aircraft (large and small); helicopter services; infrared sensing expertise; incident management personnel (overhead teams); and specialized equipment (e.g., remote automated weather stations, fuel bladders, etc.).

GLOBAL CLIMATE CHANGE RESEARCH

Senator **Reid**. Thank you, Senator McClure. Before you leave, I want to direct your attention to something that you and I had spoken of at the last time we had an Interior Appropriations meeting and Senator Byrd was chairman. That is global climate change research.

We have had several hearings on budget requests which include dollars for global warming projects. BLM's is a small amount compared to some of the other Federal agencies—$2.4 million. I would ask that you lend your wisdom and experience to this member of the committee to determine how we can work something out to try to coordinate all of this global warming money asked for by various agencies.

I am not directing this to you, Mr. Jamison, because you all stand alone, but I just believe that all these Federal agencies are using this as kind of a throwaway effort to increase their budget. If they are not, then I think that we had better get some handle on how the different global climate change research programs are coordinated.

I would have to believe that we need to coordinate the Geological Survey's work, the Park Service's survey, the BLM's proposal, and on and on. Every agency that has appeared before this subcommittee is asking for money for global climate change research. I worry that there are unnecessary or duplicate studies in these budgets we've reviewed.

Senator **McClure**. Mr. Chairman, I might respond in a couple of ways. One is that certainly I agree with your basic premise that we ought to coordinate our activities. I would say this. Every Federal agency, every State, and every local agency has budget experts who have been around longer than you and I, and they recognize very quickly that when there is a currently popular item, they had better get aboard as well.

On a less cynical tone than that, they recognize that if there is a national problem for which their agency has a certain amount of expertise, they can work to bring about a unified national approach in order to maximize our capacity to respond.

I think that there are some reasons for several agencies within the Federal Government to be involved, but I think that there is a very great need to provide the maximum of interaction between them so that we don't duplicate efforts.

Senator **Reid**. I think that at the very least, Senator McClure, that the staff of the committee, when we are looking at trying to save money down the road, which we will, should direct some significant attention to maximizing the efficient use of global warming research investment by the Government.

We are talking about multimillions of dollars in global warming research. I just wanted to again mention that to you, because the chairman and I talked about it a little bit last time.

GLOBAL CLIMATE CHANGE RESEARCH COORDINATION

Mr. **Jamison**. Mr. Chairman?

Senator **Reid**. Yes.

Mr. Jamison. Mr. Chairman, I would like to add that we in the Department of the Interior are also tied into this program that is run Governmentwide. I would like for Tony Itteilag just to give you a 2-second version of how our request fits together in global climate change research.

Senator Reid. All right.

Mr. Itteilag. Senator, the——

Senator Reid. Your 2 seconds are up. [Laughter.]

Mr. Itteilag. I would suggest that the budget amounts came out of a process involving something called the Committee on Earth Sciences, which is an interagency committee, headed up by Dr. Dallas Peck, the Director of the Geological Survey.

What I would suggest only is that perhaps the staff would like to have a special briefing by Dr. Peck, so that they could better understand how this budget was put together, and why we have a multiplicity of agencies and departments involved.

The Senator, of course, suggested that it is based on the expertise of the particular organizations and their various fields, but there was a coordinated effort. It did go beyond the usual way we put budget estimates together, and it involved scientific expertise to a great degree as well.

Senator Reid. Thank you very much.

Senator McClure. Mr. Chairman, I would be willing to undertake such an effort, or cooperate with you in doing that. I would say this. If Dr. Peck is heading it, I would have some suspicion that he has found a way to load his operating overhead into that particular initiative. [Laughter.]

I have had some experience with him in that regard.

Senator Reid. You know, Senator McClure, you laugh, but the biggest item in the Geological Survey this next year is global warming.

Senator McClure. I wasn't laughing. [Laughter.]

Senator Reid. I guess you and I were the only two not laughing. I would also ask that the questions of Senator Stevens as submitted be answered, and if you could get those to us in a couple of weeks that would be appreciated.

GRAZING MANAGEMENT FUNDING NEEDS

Mr. Jamison, your $42 plus million request for the Grazing Management Program to OMB was dropped by $5 or more million to $37.5 million. If Congress provided funds at the original level, what additional activities would you undertake? I know that in Nevada, from what I hear from the Forest Service and the Bureau of Land Management, that we simply don't have enough manpower to properly manage range lands.

Mr. Jamison. There are two areas we would emphasize. One is that we want to keep the process of completing AMP's going and get AMP's done on all the appropriate areas. That is one priority. The second is monitoring which is determining actually how the condition of the range is. It is an insurance policy not only for the livestock industry, but for the environmental community, too.

But we are doing a fairly good job, especially once we get an AMP in place. That is where I pick up those dollars.

CONDITION OF THE RANGE LANDS

Senator **Reid**. The Washington Post of January of this year, contained an article titled, "Grazing Federal Lands to Dust," which was certainly an attention grabber. The article stated that ranchers pay below market rates to run their cattle on Federal land and BLM has discouraged employees from proposing and making land management changes.

Using Federal statistics, the National Wildlife Federation and the Natural Resources Defense Council, have concluded that two-thirds of the BLM range land is in an unsatisfactory condition.

Are we losing ground as this article states?

Mr. **Jamison**. No; I don't think so, Senator.

Senator **Reid**. Well, tell us in your own words the general condition of the range lands.

Mr. **Jamison**. Well, our estimate is that we have about 15 percent that are in the top categories. Excuse me, we have 3 percent in what we call the potential natural, which is the old excellent category; and then we have what we call late-seral, which would be 30 percent; and then mid-seral, which is the old fair condition, we have about 36 percent. In early-seral, the poor condition, we have about 16 percent.

Let me give you a little history on it, because the change takes place very slowly. Since the 1930's, we have doubled the amount in the top categories, and we have halved the amount in the poor categories.

In other words, there was about 30 percent that was in the poor category in the 1930's, and that is now at about 16 percent. My goal is that by the diamond jubilee of the range program, the year 2009, to bring or to have the poor category somewhere down around the 10-percent mark.

Our experts have told me that I will probably never be able to get it much below that level in the poor category because of disease and fire, and those things. I think that if we can get it up into what we call the mid-seral, that is where our management takes place.

Because it does not pay to have only the top condition out there because it is probably the worst habitat for the most uses. In other words, if you have tree cover, it may not have the most benefit for wildlife, et cetera.

You want to keep most of the range land in what we call under the old categories, the fair, good, and excellent classes. We want to have our lands in the most operable management opportunities. I would like to submit our latest range report for the record. I think that we have good support from both the environmental community, in general, and the livestock community, for our goal.

Senator **Reid**. That is a new report, obviously. It says 1990.

Mr. **Jamison**. It has been out for about 1 month.

Senator **Reid**. We will make that a part of the record. Senator McClure.

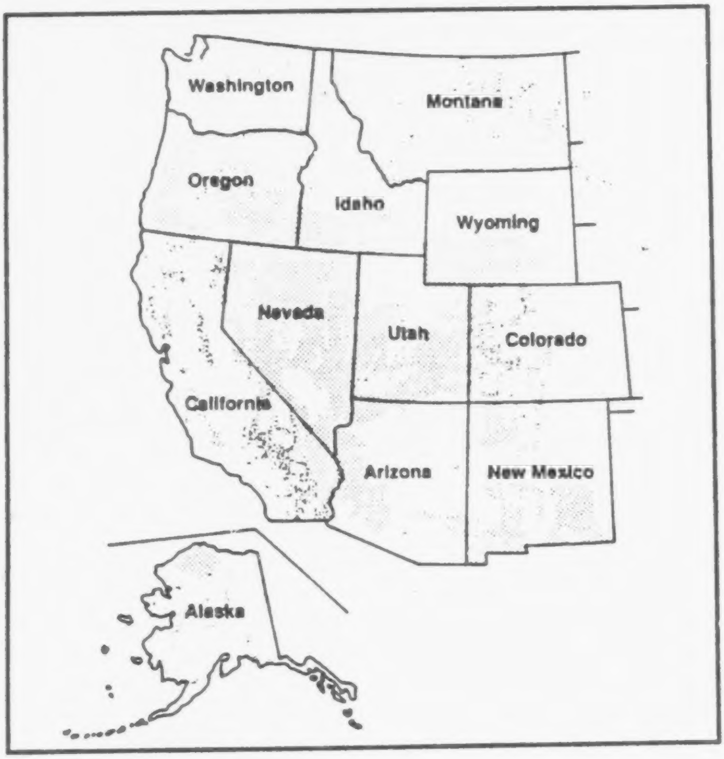
[The information follows:]

The State of the Public Range

One of the major goals of the Bush Administration's natural resources program is the promotion of responsible stewardship of the Nation's public lands. This is the ultimate objective of the Bureau of Land Management's multiple-use administration of 170 million acres of public rangeland, as sanctioned by the Federal Land Policy and Management Act of 1976.

The rangelands of the 16 western States provide seasonal forage for 3.5 million head of livestock, habitat for fish and wildlife (including many threatened and endangered species), sources of minerals, and a variety of recreational opportunities, and serve as watershed for the major river systems of the West.

LANDS MANAGED BY BLM


Washington
Montana
Oregon
Idaho
Wyoming
Nevada
Utah
Colorado
California
Arizona
New Mexico
Alaska

An important use of this vast and arid land is the grazing of livestock owned by 19,000 permittees and lessees. In some areas, ranchers are more than 80 percent dependent on the public rangeland for the viability of their operations. Fully 50 percent of the Nation's marketable lambs and 20 percent of the calves going to feedlots are raised in the western public land states. BLM and Forest Service lands produce approximately 10 percent of the grazing forage in the United States.

From the mid-1800s until the passage of the Taylor Grazing Act in 1934, livestock grazing on the public range was highly competitive and totally unregulated. Cattle numbers peaked in 1885, sheep numbers in 1910. The major damage to the condition of the range had undoubtedly occurred by the turn of the century. The Act established an orderly system for controlling grazing, with limits on areas and seasons of use and numbers of animals. The decline in grazing pressure has continued, from a high of 22 million animal unit months in 1941, during the war production effort, to about 10.5 million AUMs in 1988-89.

Today BLM's professional range conservationists monitor the health of these lands. At the end of each grazing season, they determine the numbers of livestock and months of use. They measure the consumption of indicator forage species in key areas. They record precipitation and temperature data, and, by field observation and photography, they track long-term trends in condition. This information is used in making necessary management adjustments.

Current Condition of the Range

Respected authorities in range science have stated that the public rangelands are in better condition than ever before in this century.* "Condition" is technically defined as the degree of similarity of present vegetation to the potential or climax plant community.

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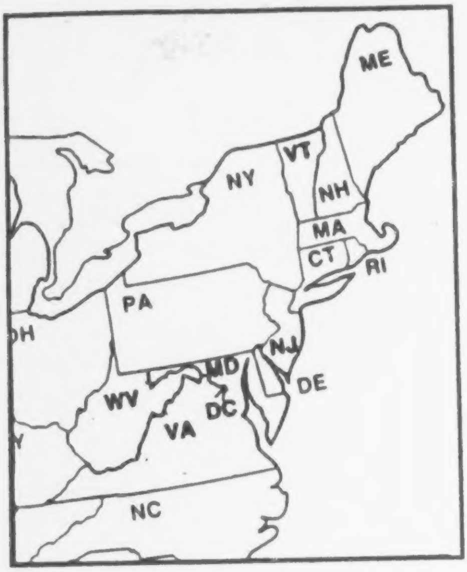
* Box, T. 1990. Rangelands. In Natural Resources for the 21st Century, American Forestry Association, pp. 101-120. Covelo, CA: Island Press.

1989 RANGE CONDITION

Total BLM Acreage	Potential Natural (Excellent)	Late Seral (Good)	Mid-Seral (Fair)	Early Seral (Poor)	Unclassified
170,516,176	5,543,677 (3%)	50,493,606 (30%)	62,107,036 (36%)	28,002,487 (16%)	24,369,370 (14%)

Equivalent area of BLM rangeland in "good" to "excellent" condition



In 1989, BLM classified over 56 million acres in "good" to "excellent" condition. This encompasses an area greater in size than the states of Virginia, West Virginia, Maryland, Delaware, New Jersey, Vermont, and the District of Columbia.

Thirty-six percent of the range was ranked as "fair," often a very satisfactory stage for producing high-quality forage, wildlife cover, watershed protection, and an aesthetic landscape. The 16 percent classified as "poor" is the lowest percentage ever recorded in this category. The 14 percent unclassified includes areas of annual vegetation, reseeded plots, and ungrazed lands.

BLM recognizes that the use of these resource value rating terms ("excellent", "good", "fair", "poor") has created unrealistic expectations about management success and the potential for improvement to higher stages of condition. In the future, BLM will also report range condition in the more meaningful ecological terms of seral stage: early, mid-, and late seral, and potential natural or climax. Since the Forest Service uses this terminology, this change will result in uniform condition reporting on all Federal rangelands.

SERAL STAGES

The developmental stages of an ecological succession

- **Early Seral: 0-25% similar to Potential Natural**
- **Mid Seral: 26-50% similar to Potential Natural**
- **Late Seral: 51-75% similar to Potential Natural**

POTENTIAL NATURAL

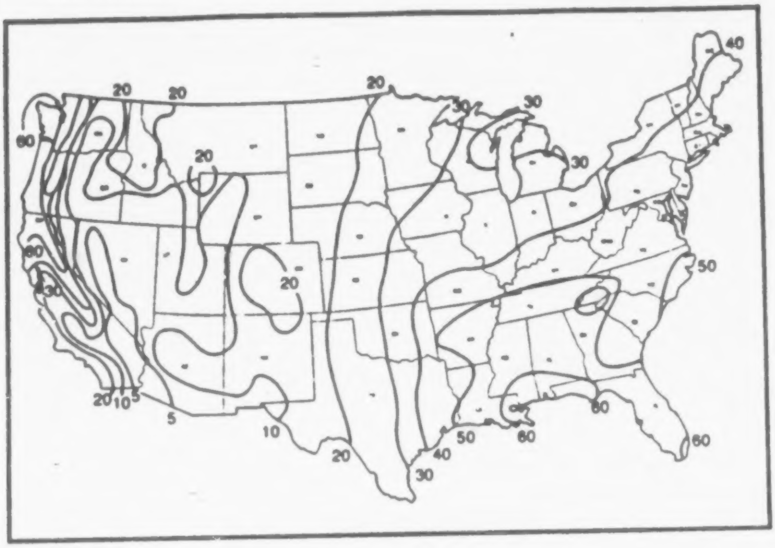
The plant community that would become established on an ecological site if all successional sequences were completed without disturbances.

Plant Succession: East v. West

Progress in range condition is usually very gradual in the arid West. In normal plant succession, annual grasses and forbs are gradually replaced by perennials, including shrubs, and finally, if the site has the potential, trees will often dominate. The potential is determined by climate, precipitation and soils, among other factors. In some cases, the climax community may consist of only sparse grass or shrubs.

Southeastern hardwood forest communities, developing in moderate temperatures with 40-60 inches of annual rainfall, can take 150 years to progress from bare ground to a climax stage. In contrast, a juniper woodland, developing to climax in the western United States under harsh temperature extremes, short growing seasons, and with 5-20 inches of annual precipitation, can take 300 years. In western plant communities, it can require 25 to 200 years to progress to the next seral stage. Patience is a necessary virtue for Western range managers.

U.S. PRECIPITATION AVERAGES (IN INCHES PER YEAR)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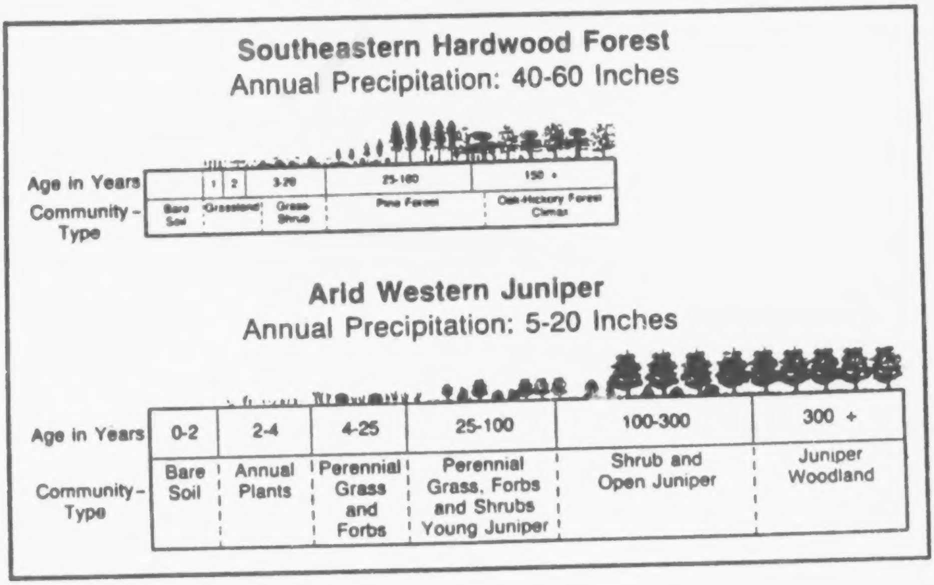
CLASSICAL SUCCESSION



Southeastern Hardwood Forest
Annual Precipitation: 40-60 Inches

Age in Years		1	2	3-20	25-100	150 +
Community - Type	Bare Soil	Grassland		Grass-Shrub	Pine Forest	Oak-Hickory Forest Climax

Arid Western Juniper
Annual Precipitation: 5-20 Inches

Age in Years	0-2	2-4	4-25	25-100	100-300	300 +
Community - Type	Bare Soil	Annual Plants	Perennial Grass and Forbs	Perennial Grass, Forbs and Shrubs Young Juniper	Shrub and Open Juniper	Juniper Woodland

Long-Term Trend: True Measure of Management Success

Because of the slow pace of plant succession in the arid West, long-term trend in condition is a far more meaningful measure of range management success than an annual condition report.

This year's report confirms the favorable trend of the past 50 years. Since 1936, the area in late seral to potential natural ("good" to " excellent") condition has doubled, from 15.8 percent to 33 percent, while the area classified as early seral ("poor") has been halved, from 36.3 percent to 16 percent. Current trend is stable to improving on over 87 percent of the public rangeland.

HISTORICAL RANGE CONDITIONS

Percent by Condition Class

Year	Potential Natural (Excellent)	Late Seral (Good)	Mid-Seral (Fair)	Early Seral (Poor)	Unclassified
1936	1.5	14.3	47.9	36.3	
1966	2.2	16.7	51.6	29.5	
1975	2.0	15.0	50.0	33.0	
1984	5.0	31.0	42.0	18.0	4
*1989	3.0	30.0	36.0	16.0	14

*No substantial change should have occurred in the brief time period between 1984 and 1989. The decrease is attributable to a difference in reporting, as indicated by the increase in the unclassified percentage. Reporting procedures will be refined to achieve consistency in future reports.

Wildlife on the Range

Further proof of the improving trend in the condition of the public range is the dramatic increase in big game populations since 1960, in the presence of livestock and in spite of human encroachment and significant habitat loss.

BIG GAME POPULATIONS
(Excluding Alaska)

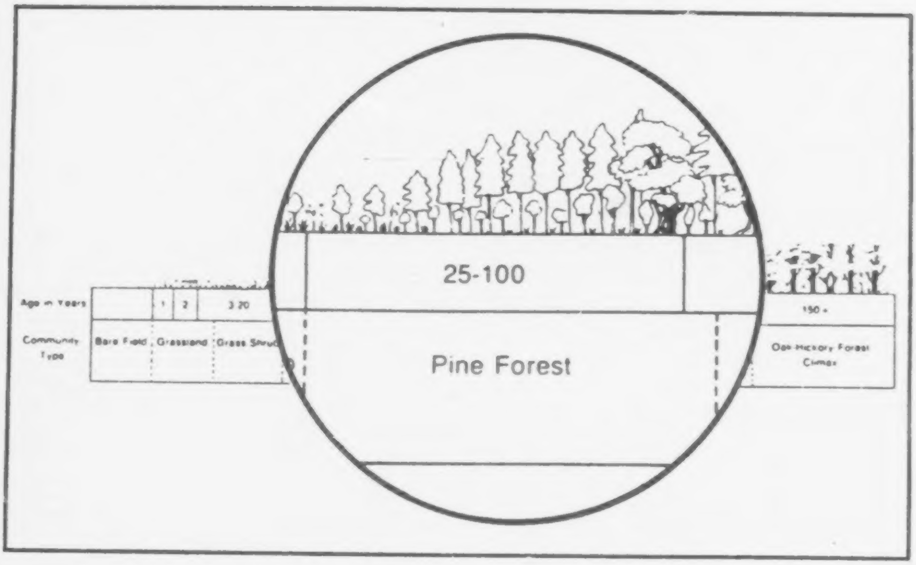
	1960	1988	% Increase
Antelope	139,309	295,690	112
Bighorn	4,588	19,956	435
Deer	1,113,097	1,449,308	30
Elk	18,278	142,870	782
Moose	736	3,505	476

*Public Lands Statistics, (1960, Volume 145, 1988, Volume 173)

Setting the Standards for Range Management.

It is probably undesirable to manage for climax communities on all the public rangeland. The potential natural stage may not always provide the best mix of vegetation for desired biological and social values. Maximum vegetation diversity, often the most desirable objective for livestock and some species of wildlife, occurs frequently not at climax, but in the mid- to late seral stages.

MAXIMUM VEGETATION DIVERSITY


Age in Years
1
2
3 20
25-100
150 +
Community Type
Bare Field
Grassland
Grass Shru
Pine Forest
Oak-Hickory Forest Climax

It is the goal of BLM to determine **desired plant communities** for all allotments, based on land capability analyses and reflecting multiple-use objectives, and to manage and monitor the sites accordingly. In the future, BLM's success in producing these desired plant communities will be a benchmark for judging the success of its range management program.

THE RANGE OF OUR VISION

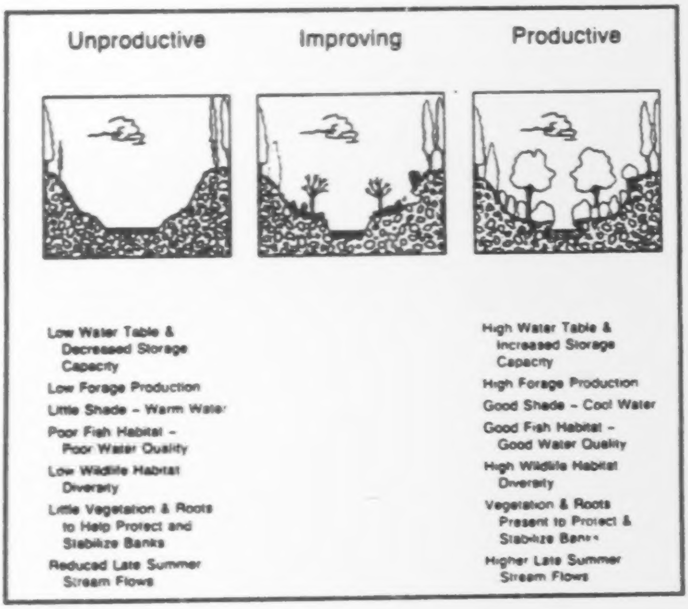
By the year 2009, the 75th anniversary of the Taylor Grazing Act, BLM aims to accomplish these range management objectives:

1. Achieve late seral to potential natural stage on 75 percent of BLM riparian areas by 1997

Riparian areas comprise less than 1 percent of the public range, bordering 40,000 miles of streams and 900,000 acres of lakes and ponds in the Lower 48 states. But these vital "ribbons of green" are critical sources of livestock water and forage, fish and wildlife habitat, flood and erosion control, water quality, water storage, aquifer recharge, and recreation.

In 1989, the BLM State Offices calculated a need of $60.7 million to meet their goals of riparian inventory, project planning and development, maintenance and monitoring over the next five years. In 1990, BLM will announce its comprehensive Riparian-Wetlands Strategy for the decade. Also in this year, each state will expand its riparian demonstration areas to feature productive management partnerships with permittees and others.

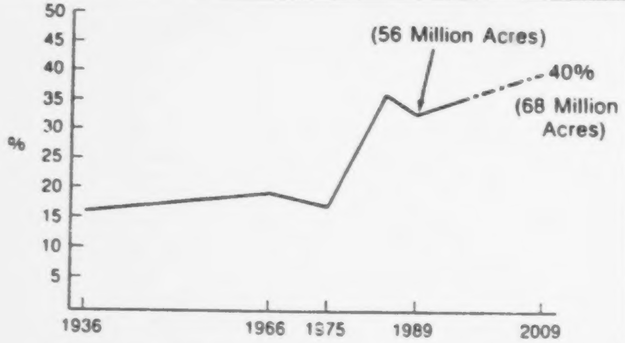
RIPARIAN AREAS


Unproductive
Improving
Productive
Low Water Table & Decreased Storage Capacity
Low Forage Production
Little Shade – Warm Water
Poor Fish Habitat – Poor Water Quality
Low Wildlife Habitat Diversity
Little Vegetation & Roots to Help Protect and Stabilize Banks
Reduced Late Summer Stream Flows
High Water Table & Increased Storage Capacity
High Forage Production
Good Shade – Cool Water
Good Fish Habitat – Good Water Quality
High Wildlife Habitat Diversity
Vegetation & Roots Present to Protect & Stabilize Banks
Higher Late Summer Stream Flows

2.Increase the area in late seral to potential natural stage to 40 percent (68 million acres)

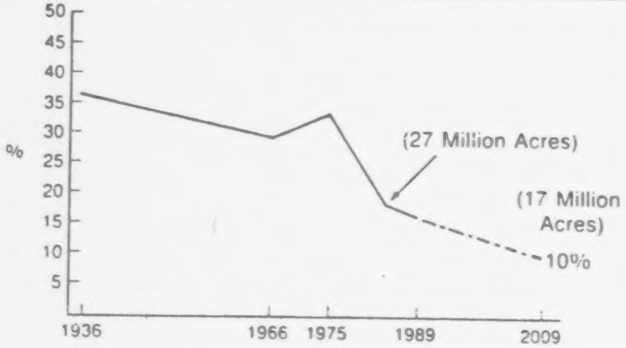
This will require implementation of management plans on an additional 3,600 high-priority grazing allotments by 2001. These are allotments with resource use conflicts or unrealized potential for improvement. The plans will be developed in full cooperation with ranchers and other interests. At current funding levels, however, it would take until 2016 to implement management plans on these allotments.

Natural (Excellent) and Late Seral (Good) Range Condition (1934-2009)



Diamond Jubilee Goal: 40% (68 Million Acres)

Early Seral (Poor) Range Condition (1934-2009)



Diamond Jubilee Goal: 10% (17 Million Acres)

3. Reduce the area in early seral stage to 10 percent (17 million acres)

Considering the incidence of wildfire, insect invasion, abnormal climatic conditions and other unforeseen events, it is estimated that 10 percent of the range will always be in early seral condition.

BLM believes that these percentages, based upon a projection of the progress made since 1936, are consistent with the potential of natural systems to respond to management.

What it Will Take

Accomplishing these objectives will require the steadfast commitment of Congress and the public.

In FY 1989, 47.5 percent of available funds was devoted to the fixed costs of administration and permitting. Only 36.5 percent of the budget was available for the most critical on-the-ground activities of allotment management planning, range improvements, and monitoring. The remaining 16 percent was spent on use supervision, inventory, weed control, and land use planning. Within our fiscal capabilities, BLM will continue to make progress in these areas. To achieve our objectives for 2009, however, would require an annual budget of $50.8 million, with approximately 53 percent of the total devoted to the three key field activities.

The Bureau of Land Management is proud of its professional staff and their accomplishments in range stewardship, in cooperation with the public range permittees and other partners, over the past 50 years. With the support of Congress and the public, we are confident that the Diamond Jubilee of the Taylor Grazing Act will find the public rangelands in even more significantly improved ecological health.

RANGE MANAGEMENT PRACTICES—JUNIPER CHAINING

Senator McClure. Mr. Chairman, could I give you an example of one of the problems that we have with respect to public perceptions. I recently saw a news item in which some environmental activists were very much opposed to an activity, and I believe that it was on BLM land, and which the BLM was——

Mr. Jamison. In southern Utah, sir.

Senator McClure. It was in Utah and it was——

Mr. Jamison. It was chaining juniper.

Senator McClure. To put it mildly they are going out there with some big tractors with a chain between them, and ripping the juniper out of the ground. Now to somebody looking at that operation, with no knowledge of the background, that is a horrible thing to see. Why in the world would you be doing a thing like that.

But anybody who is familiar with that land, over time in natural conditions, would recognize that the juniper invaded natural grasslands because fire had been controlled that ordinarily would have controlled the juniper.

The range was far less natural, and far less productive with that overgrowth of juniper that crowded out everything else than it was in its previous status, and to which you were attempting to return it; is that not a good example?

Mr. Jamison. That is a great example, and it was done for two purposes. One was for wildlife, and the other was to provide livestock grazing, and it was for a dual benefit. That is where we had let one end of the spectrum get control.

Senator McClure. But the presence of the juniper crowded out everything else, including most of the wildlife and a little bit of bird life there, but not the general mixture of wildlife that occurs on the natural range. The presence of the juniper was an unnatural condition, brought about by man's manipulations.

Mr. Jamison. That is true, Senator.

VOLUNTEER EFFORTS

Senator Reid. You are proposing some increased money for volunteer efforts for range management programs; to support volunteer efforts for range management programs. In fact, you are asking for three new employees.

The Bureau received over 5 million dollars' worth of volunteer services in 1988, at a cost of about $500,000. So, do you think that this is a good investment?

Mr. Jamison. Oh, absolutely, and it is the right way to go. It is probably the most misunderstood program that I deal with, besides probably horses, and that is the range programs. We have a lot of people that are helping us, and when I say range, that means more than just one program.

It means how we do our riparian areas, and how we handle our wildlife, and how we handle forage for livestock and wild horses. So, when you couple all of those together, we mean more than just the range category.

RIPARIAN AREA MANAGEMENT

Senator **Reid**. We hear a lot now about riparian management, and it is a growing concern to a number of different organizations, including the mining industry, conservation groups, professional organizations, recreationists, and, of course, the agricultural community.

It is my understanding that the management of the riparian areas occurring on public lands is also a high priority within the BLM.

It is also my understanding that the Bureau State riparian coordinators met earlier this year to identify the funding and manpower needed to meet BLM's objective of having 75 percent of the riparian habitats in good or better condition by 1997; is that right?

Mr. **Jamison**. That is correct.

Senator **Reid**. Now, it is my further understanding that you are trying to complete strategy plans?

Mr. **Jamison**. That is correct.

Senator **Reid**. Would you indicate why other States were able to complete their strategy plans and Nevada was not?

Mr. **Jamison**. One of the things that we have been putting a lot of emphasis on in Nevada, Senator, is to address the tortoise problem, and that became a priority. They will have a good riparian program there in Nevada.

WILDLIFE HABITAT MANAGEMENT FUNDING

Senator **Reid**. Switching now to wildlife programs. I think that we all believe in pursuing an improved quality of life. I am interested in the Bureau's Fish and Wildlife 2000 and riparian initiatives. Based on total acres, diversity of habitat, and site capability, for example, Nevada has the potential to have the premiere wildlife program in the Bureau, but I do commend you and those in your agency for pursuing these strategies for the future.

Now, as far as implementing the strategy, while there have been great strides made in improving the fiscal outlook of the wildlife program, and while we are pleased to see an increasingly proactive wildlife budget, it is my understanding that the Department of the Interior recommended a budget of $34 million, and yet OMB cut that back $8 or $9 million; is that correct?

Mr. **Jamison**. Yes; that is correct, Senator. All I can say is that I have been very fortunate that BLM—and I have to say that the Secretary has given me good support in some programs. One was the wildlife program, the recreation program, and also the riparian work with those two. He also saw the need for the range land program.

Those programs all have gotten better as far as I can see, and he has supported us. I think we made a big step in the right direction for 1991.

Senator **Reid**. I have a number of other questions along those same lines in more detail that I would like you to pursue.

Mr. **Jamison**. I would be happy to.

DESERT TORTOISES

Senator **Reid**. The Fish and Wildlife Service announced that the desert tortoise has been listed as threatened. The desert tortoise listing, which has been protected since August 1989 under an emergency ruling, is expected to further restrict habitat areas used by the tortoise.

The range of the desert tortoise is in the Mohave Desert of California, Nevada, Utah, and Arizona. You don't have them in Idaho?

Senator **McClure**. I hope not.

Senator **Reid**. No; you don't. [Laughter.]

I feel that we should import them to Idaho. The range of the desert tortoise is in the Mohave Desert of California, Nevada, Utah, and Arizona. What I am concerned about is how is this going to affect your lands backlog?

Mr. **Jamison**. Until we get an agreement, and we are moving rapidly toward making a final agreement especially in Clark County, Senator, we work with the State government, the fish and game department, the local county government, the business community, the environmental community, and others, and the Fish and Wildlife Service.

We work to put together a package of where we could go ahead with things and basically where we can't. For example, an area in Clark County where there is high development, and you have 4,000 people moving a week to Las Vegas, or excuse me, a month, we felt that we had to come up with a program where we can protect the tortoise by doing some other things outside a high development area. We are very close to bringing that agreement to closure and approval by the Fish and Wildlife Service.

But, until we get that agreement, our lands cases are going to build up, because we still have to get individual clearances. We also will afterward, but I think we have set the ground rules for these clearances in Clark County, and it is a major step in the right direction.

If it would not have been for the business community looking at the industry effect realistically, and the environmental community looking at it as a partnership with us, I don't think that we would have made it this far. I just want to congratulate your folks in Clark County.

RED ROCKS RECREATION AREA

Senator **Reid**. There is an outstanding visual and cultural and natural resource outside Las Vegas, which you have seen, called Red Rocks.

It is, in fact, of such outstanding quality that I have introduced legislation for designation of the area as a national conservation area, and you should be advised in that regard that we are working with the Nevada House delegation. We are working together on the water language coming in or out.

Mr. **Jamison**. I noticed in your proposal, Senator, which I again reviewed last night, and I thank you for sending me a copy, that the water rights language just raises a red flag, and it raises a red flag to the gentleman sitting next to you, the Senator from Idaho.

My advice would be to leave it out, and we can move it rapidly.

Senator **Reid**. That's fine. So, as I said, whatever you can get the House to agree on will be fine.

Mr. **Jamison**. Fine.

WATER RIGHTS LEGISLATION

Senator **McClure**. I might just interject with respect to water rights language. The only position that I have taken up at this time without respect to my own opinion as to what ought to be there, is that Congress ought to spell out what we intend so that it is not left for somebody later on to try to decide what it was that Congress intended to do, and leave it to the courts to make the final determination.

The courts are not fitted to make that kind of subjective judgment of the assignment of resource values. They ought to expect to have guidance from the Congress of the United States. Before we were aware of the fact that there were going to be questions about Federal reserved water rights and special land designations, it was appropriate, and perhaps excusable if not appropriate, for Congress to be silent on it.

But we know now that this is an issue, and an issue which will be raised by someone at some future time, and without any guidance from the Congress. The courts have nowhere to go, except to try and construct some therapy of their own as to what was or should have been in the mind of the Congress at the time that the Congress made the land withdrawal.

It has been my position, and it remains my position, that Congress has a duty to be precise, and if Congress cannot be precise, then indeed Congress is not doing its job.

Senator **Reid**. So much for your theory. [Laughter.]

Mr. **Jamison**. I will be precise. Leave it out.

LAW ENFORCEMENT IN NEVADA

Senator **Reid**. Mr. Jamison, one of the concerns that I have about the entire southern Nevada area, Park Service lands, BLM lands, and Forest Service lands, is that there are a lot of things going on that are illegal, but there is not enough manpower to do anything about it.

The BLM falls into that category. The law enforcement programs throughout the Federal Government, of course, continue to grow. The Bureau is requesting only an additional $1 million in 1991 over what we appropriated last year. Is this going to be enough to do any good?

Mr. **Jamison**. Again, I think, that it is a step in the right direction, and I think that we should concentrate our law enforcement people in the areas of highest needs, before the new rangers or investigators are scattered to the four winds.

We have a major effort by President Bush on the drug issue, and traffic along the southern borders. That will be given some additional emphasis, but I think that your area and the areas in New Mexico and Arizona, just because of their use, need some additional enforcement.

We need to get the best people that we can get out on the land, and in order for them to do their job right these officers need to be highly trained. It is a slow building process.

Senator REID. Well, some of the problems that we have with this wild horse situation are due to the tremendous lack of manpower. When all of those horses were found shot, nothing happened for a long period of time.

The main reason that nothing happened was that there was nobody to actually do the work. I don't know how many people the Bureau of Land Management put on that, but you only have a few people for the whole West. I think we really need to become more aware, and I think it could wind up being cost effective.

Mr. JAMISON. I just think that the program must be done right. I don't like the heavy hand of the Federal Government on areas there, but we are getting such people pressures in areas such as in California, and in these drug areas, that just for the health and safety of the—well, the wild horses concern me—but the health and safety of innocent campers throughout those areas, where they get involved in situations whether they want to or not, we are not going to have people out there making illegal drugs.

Senator REID. And that is particularly difficult in the Las Vegas area, because it is a 24-hour town, and most of your people want to work during the daytime.

Mr. JAMISON. That's correct.

LAS VEGAS INTERAGENCY OFFICE COMPLEX

Senator REID. It is my understanding that the Bureau of Land Management, the Fish and Wildlife Service, and the Forest Service entered into an interagency agreement in January of this year for developing a proposal for the construction of an interagency office complex to meet the needs of southern Nevada.

I have been a real advocate of consolidating Federal services in any contracts. For example, I worked hard to get a Federal building in southern Nevada because we have Federal agencies all over that county. Now, it didn't solve the problem, but at least we got another big building to put these other agencies in.

I wholeheartedly support these efforts to build a new facility for the BLM, Fish and Wildlife Service, and Forest Service when it is authorized. As you may or may not know, the Federal Government in the last 10 years has not been in the building business.

We have been having the private sector build, and then we lease with an option to buy. I think that this is something that the three agencies must take a very, very careful look at. It is something that is badly needed, and I don't know what we are going to do about it.

It is not efficient the way things are right now I would ask that you convey my thoughts to the other agencies.

Mr. JAMISON. We will look into that, Senator.

OUTLOOK FOR THIS FIRE SEASON

Senator REID. Thank you. A recent article in the New York Times noted that this year could be the worst fire year in the Nation's history. How do you feel about that?

Mr. Jamison. Well, personally, I have been in parts of the Southwest and in Utah, and we still have drought conditions there.

Senator Reid. It shouldn't be this dry at this time of the year either should it?

Mr. Jamison. That's right; we have had to move livestock early, especially in Utah, and thanks to the cooperation of the livestock industry, we have the numbers of livestock way down there, and the numbers are just basically a function of the moisture content.

Our estimate from the Boise Fire Center and our experts is that we are going to have a fire season similar to what we did in 1989.

Senator Reid. How many acres of land is the Bureau responsible for managing?

Mr. Jamison. About 274 million surface acres.

LAND ACQUISITION

Senator Reid. On page 3 of your justification, you state that the BLM's mission and primary objective is to manage the public land and its many resources under the concept of multiple-use and sustained yield to provide the maximum public benefit from these national resources.

Surely the BLM has high priority land acquisition projects for the range, minerals, and timber programs. Why aren't acquisition projects related to these programs on the BLM's list?

Mr. Jamison. Well, one of the things that determines the acquisition program is that it is tied to a formula that the entire Federal Government uses. It has the President's initiatives that any of the acquisitions that we have are near to population centers. We do have a lot going on in other areas, but it is mostly via the exchange program—and we are blocking up public lands.

But those acquisitions have not reached the top of the list because we have parameters that are more tied to population centers.

SPOTTED OWL CONSERVATION STRATEGIES

Senator Reid. The timber program in the West continues to be in an unsettled state. A decision on the spotted owl proposed listing is expected sometime this year in June, and we know about the current allowable sale quantity that was last adjusted in 1988.

The Interagency Scientific Committee has just released its report, "A Conservation Strategy for the Northern Spotted Owl." The committee has concluded that the owl population has declined due to losses of habitat from logging and other natural disturbances and that current management strategies need to be revised to protect the species.

Twelve percent of the northern spotted owl habitat is on lands that are under BLM's jurisdiction. How do the committee's recommendations vary from your current management practices?

Mr. Jamison. Senator, we had only completed about one-half of our analysis for what has been made public to date. Our first analysis of the Jack Ward Thomas report measures was based on looking at a map that they provided us 2 days before there was to be a hearing over on the House side.

That map did outline what we will call the HCA, or the habitat conservation areas. In our first blush look at that, we estimated somewhere between a 30- and 40-percent reduction of the ASQ.

But there are three other parts to that report that we did not have at that time to review. Those were in addition to the habitat conservation areas, the category three areas, which said that in certain areas you had to protect spotted owls within a 1.5-mile radius, and other areas which we call category four areas, which would protect basically a quarter-mile of known spotted owl areas.

Coupled with that, there was another assumption that was made by the Jack Ward Thomas report, that is called the 50-11-40 rule, and it said the goal was to keep lands between the habitat conversation areas—and Mr. Berg will correct me if I am wrong—with approximately 50 percent of those lands should have trees that are 11 percent——

Mr. **Berg**. Eleven inches.

Mr. **Jamison**. Yes; 11 inches in diameter or greater and that the crown story should be 40 percent or greater.

Mr. **Berg**. Forty percent crown cover——

Mr. **Jamison**. Now, you couple all of those factors in and our estimated ASQ reduction is going to be much higher than the 30 or 40 percent that we estimated at the earlier hearing.

Senator **Reid**. We understand that now you are estimating that there will be a 62-percent reduction in the allowable cut. Does that sound about right?

Mr. **Jamison**. That is what the Secretary indicated at the hearing in front of Mr. Yates yesterday, and that is accurate.

Senator **Reid**. It is my understanding that you and the Forest Service have been conducting economic and social impact analysis, which was to be released today.

Mr. **Jamison**. Our commitment to the House committee was that we would try and get it out sometime around May 1.

Senator **Reid**. So it is not out yet?

Mr. **Jamison**. No; it is not out yet. We are nearing completion.

Senator **Reid**. You didn't tell them what year did you?

Mr. **Jamison**. Well, I indicated this year. [Laughter.]

I made a mistake. The Secretary would like to review those analyses before they are issued publicly. We hope to get that done very quickly, maybe as early as the latter part of this week, or the first part of next.

WATER RIGHTS IN CLARK COUNTY, NV

Senator **Reid**. You are familiar with the fact that Clark County, NV, has made a number of proposals for obtaining water rights outside of Clark County. Are you familiar with that at all?

Mr. **Jamison**. All I am familiar with, Senator, is that there has been some proposals by different groups to bring water in not only to Clark County, but also—and I think there is another proposal as well, but that is the extent of my limited knowledge on that, sir.

Senator **Reid**. OK. What I would like you to do is have one of your staff at some later time brief me on these two proposals in southern Nevada, because I want to know what the input of the Bureau of Land Management is going to be on both of those.

Mr. **Jamison**. I would be happy to, Senator.

ADDITIONAL COMMITTEE QUESTIONS

Senator **Reid**. Mr. Jamison, and your associates, I appreciate your testimony this afternoon. The committee appreciates it, and as I have indicated previously, we have a lot of questions that we will submit to you in writing from the committee, from Senator McClure, from Senator Stevens, and maybe some others.

We would ask that you respond to these questions as soon as you can, but no later than 3 weeks.

[The following questions were not asked at the hearing, but were submitted to the Bureau for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Oil and Gas

1. Question: **Please explain briefly the problems and the impacts that were found by the Senate Select Committee on Indian Affairs, the OIG, and the GAO. Specifically, how do you plan to address the criticisms? What is the timeframe?**

Answer: The investigations or audits of the Senate Select Committee, OIG, and GAO raised several issues regarding BLM's Inspection and Enforcement Program (I&E), including the following:

- unclear criminal investigative authority on Indian lands;
- reliance on purchaser measurements of oil sales;
- poor coordination between law enforcement (LE) and inspection and enforcement personnel on theft reports;
- lack of designated contacts for theft reports;
- unidentified potential thefts by Koch Oil;
- insufficient checks on certain measurement actions;
- inadequate operator compliance and BLM enforcement of certain operational, environmental protection and reporting requirements;
- inadequate support and guidance to the field;
- inadequate technical expertise on the part of managers;
- ineffective coordination with other agencies on production accountability and LE;
- ineffective coordination with industry on site security;
- inadequate I&E and LE manpower and resources;
- inadequate I&E inspection strategy;
- insufficient I&E program oversight
- insufficient policy concerning operation and monitoring of Automated Inspection and Recordation System (AIRS) database accuracy and quality.

The following are actions which we have initiated to correct the deficiencies raised by the criticisms:

- clarified the Departmental Manual regarding the Bureau's investigative authority.
- established internal coordination procedures and guidelines for theft investigation and reporting.
- designated contacts and notified Indian tribes and allottees.
- intensified oversight of Koch Oil.
- the Bureau's automated Inspection and Recordation System (AIRS) has been being revised, updated, and documented with the AIRS database quality enhanced;
- increased effort to validate database;
- continue ongoing monitoring of database;
- put maximum edit capability in-place with AIRS Version 3.00 (May 1990);
- reinitiated field office technical and procedural reviews (TPR);
- initiated increased I&E program oversight by all BLM organizational levels;
- BLM's Washington Office participation in field level TPR's has been increased;
- developed cooperative actions with industry, including sharing training resources;
- issued minimum measurement and site security standards for industry;
- developed an inter-agency memorandum of understanding, and assembled a steering committee for inspection and enforcement, and coordination;
- conducted a meeting between MMS and BLM to discuss coordination of law enforcement matters;
- developed training for personnel inspecting environmental compliance in cooperation with the USFS (pilot course is in progress and is being evaluated);
- developed an Indian outreach program in cooperation with MMS and BIA;
- increased program coordination and oversight at the Headquarters Office;
- Program review guidelines for field offices are being developed;
- Internal Control Reviews scheduled (Indian) for I&E program in FY91 and Federal I&E program in FY92;

- evaluating the feasibility of contract inspections;
- issuing a new released BLM Manual 3107: Continuation, Extension, or Renewal of Leases;
- issuing Onshore Oil and Gas Order No. 8: Well Completions/Workovers/Abandonments;
- will develop proposed rule making changes for stricter operational noncompliance penalties, and;
- well status information will be incorporated in BLM's automated data bases.

BLM has undertaken and will continue to undertake numerous actions to strengthen the quality of the inspection and enforcement program. These initiatives began in FY 1989 and will continue through FY 1992 at a minimum.

2. Question: Do you agree with these findings? If not, specifically, what don't you agree with?

Answer: BLM agreed with all the GAO recommendations. In responding to the OIG we disagreed with some of the findings but agreed fully or with qualifications to each of the recommendations.

We disagreed with the Senate Committee conclusion that there is massive theft of resources and we also strongly disagree with its recommendation to transfer the function from BLM. While we do not disagree with the Senate recommendations concerning the strengthening of gauging and reporting procedures we are concerned that these recommendations would result in changes to long standing industry practices resulting in large increases in cost to operators, purchasers, and the government. We also believe that for less serious violations an abatement period is a successful tool for obtaining compliance and therefore disagree with the Committee's call for its elimination. BLM would not oppose amending FOGRMA to allow awards for information leading to recovery of royalty and other payments on jurisdictional leases.

3. Question: Have any changes been made in your inspection and enforcement program since the abuses occurred that were cited in the GAO investigation, for example? Briefly explain what changes have taken place.

Answer: The following changes have already occured:

a. A BLM Task Force provided the Director with an assessment of viable I&E program options. After review, the Director approved the recommendation.

b. Field offices will submit proposed FY 91 inspection accomplishment plans and goals: The Headquarters office will review these plans to ensure an appropriate balance between planned I&E accomplishments and other program components.

c. BLM has issued instructions to the field to identify I&E support and technical supervisory personnel requiring training and to ensure that such personnel are trained within one year.

d. BLM has initiated, on Indian Lands, a comprehensive Internal Control Review (ICR) on I&E. Field work will continue into late 1990 and a report will be issued by summer 1991.

e. Two I&E staff positions have been added to Headquarters to enhance policy development and oversight.

f. Field offices have initiated detailed I&E program reviews.

g. BLM has developed internal coordination procedures between Law Enforcement and I&E, including an internal standardized theft reporting format and procedures.

h. BLM and USFS have cooperated in developing an environmental inspection course which is currently being held.

i. BLM's Tulsa District Office has initiated a pilot program on the revised inspection strategy for FY 91 and is testing some new procedures to help ensure production accountability.

4. Question: Your March 21, 1990, news release mentioned that BLM oversees more than 23,000 federal and Indian leases which involve about 83,000 oil and gas wells. How many inspections will be made per site in FY 1991?

Answer: It is expected that about 12,000 production inspections will be made on approximately 10,350 producing leases in FY 91. This reflects the new emphasis on labor intensive production accountability inspections. A total of 17,000 onsite inspections will be completed in 1991, 1,000 more than in 1990.

5. Question: Based on the recent reviews of the oil and gas inspection program, how many inspections should be conducted, and how many additional inspectors would be needed to conduct them?

Answer: A strategy option based on a BLM task force evaluation recommendation, building the I&E program to allow for a four-fold increase in the on-the-ground inspection force (to 322 on-the ground inspectors and 286 support personnel). Approximately a four-fold increase in inspections would be accomplished resulting in examination of 81% of both inspection items and onshore oil and gas production compared to current percentages of 45% and 56%, respectively. The revised strategy emphasizes more through inspection and audit procedures rather than individual operational events.

The needed procedural changes and increases in program staffing, training of new employees and overall effort cannot occur overnight and in fact, realistically would have to be implemented in a phased fashion over the next several years.

6. Question: What would be the additional cost for inspections that are over and above your FY 1991 request?

Answer: The recommended strategy option based on a BLM task force evaluation requires roughly an increase of $18.6 million in funding. We would phase-in this increase in budget requests over the next several years.

7. Question: Would you please comment on the inadequacies of your inspection and enforcement program that allowed Koch Industries to steal literally millions of dollars at the expense of Indian owners?

Answer: As a result of the allegations made against Koch, the Bureau reviewed a significant number of the leases in which Koch has an interest. Our review could not substantiate the allegations. During our review, we found three minor anomolies, only one of which could be attributable to an action taken by Koch oil. The Bureau of Indian Affairs and the Osage Nation conducted a similar review of Koch properties on the Osage and also found no evidence of fraud or theft.

8. Question: What is the status of your investigation of Koch?

Answer: Subsequent to the Senate Select Committee hearings in May 1989, BLM took the initiative to focus inspection resources on leases where Koch is involved as a buyer and/or operator. Koch participates as a purchaser or operator on approximately 1,100 producing Federal and Indian leases of which 327 are Indian. On June 15, 1989, the Director issued instruction outlining specific I&E inspections necessary to witness and review field activities of Koch Industries and affiliated companies (Koch). The directive required increased inspection and witnessing of Koch operations on both Federal and Indian lands.

BLM conducted independent or so-called "back-gaugings" on one shipment from each of 25% of Koch involved leases as well as stepped up production accountability inspections. During 1989, BLM conducted 462 inspection activities involving Koch Oil. BLM took on this initiative fully realizing that Koch was very aware that it was under close scrutiny from the Committee. Therefore, in addition, BLM randomly selected 42 of Koch involved inspection items and compared purchaser and producer measurement records with production reported to MMS for a 3-month period prior to the hearings.

These inspections and production record reviews resulted in only 8 minor production accountability discrepancies. It should be noted that the scope of BLM's investigation identified above does not include Koch activities prior to January, 1989.

The Committee report cited BLM's slow action on a Koch lease inspection and records review for an individual Indian inspection item in Oklahoma. This detailed, labor intensive records and field operations review which spanned a 7-month production reporting period revealed that Koch has had both over and under payment of royalty for that lease with a net overpayment to the Federal government for that period. BLM has requested an MMS audit of the royalty payments for that lease.

Koch's current procedures and practices for measurement are generally in very good compliance with Federal requirements. BLM did not find present indications of widespread company. mismeasurement or misreporting. However, there is no way to check whether past measurements were also in compliance, although previous routine inspections had not identified any significant problems. We are continuing investigations of Koch activities. The Osage Tribe, (not under BLM jurisdiction) also could not find current problems with Koch leases. Senator Dole (C.R. S3229) has also questioned the committee findings.

Mining Law Administration Program

Mr. Director, I would like to turn your attention to mining law administration, specifically the issue of reimbursable mining law administration fees. Included in the justification is a proposal to establish a new mining claim holding fee to fund your Mining Law program. Under this proposal, $100 worth of annual assessment work, which is required currently as an indicator of commitment to develop and maintain a mining claim, would be replaced with a $100 holding fee. You state that this proposal would provide environmental benefits by eliminating unnecessary surface disturbance. In addition, it is thought some claimants may wish to relinquish claims rather than pay the annual holding fee.

9. Question: Have you conducted studies on this issue and do you have specific estimates of the extent of these disturbances and the environmental impacts?

Answer: No, we have not conducted any formal studies. However, from years of experience administering the Mining Law of 1872, some surface disturbance takes place just to fulfill the annual assessment requirement even though no development of the claim may be comtemplated. In fact, this is a common practice.

10. Question: Are you saying that current BLM regulations are inadequate to protect the environment?

Answer: No, current regulations pertaining to the Mining Law Administration Program are adequate. However, regardless of the regulations there are going to be times when surface degradation takes place because the existing law requires annual assessment work.

11. Question: It is estimated that this proposal would raise $98 million annually. What would be the economic impacts that would result from diverting $98 million annually from exploration efforts?

Answer: The $100 annual holding fee is proposed in lieu of the $100 worth of annual assessment work required currently. The outlay for the mining claimant is unchanged by this proposal. Companies or individuals who are sincerely interested in the exploration and development of federal mineral resources will continue in their efforts in this area with or without a holding fee and with or without the requirement for assessment work because the long term benefits of developing a paying mine will be substantially unchanged and in most cases would offset the holding fee requirement.

12. Question: The President is on record as being against new taxes. Using OMB Director Darman's "quack" test, how do you justify this new tax in light of this policy?

Answer: The holding fee proposal is consistent with the Administration's position on user fees and is not a new tax. It is a user fee, paid only by beneficiaries to maintain a privilege granted by the Federal Government.

13. Question: What is the current estimated cost for providing these services?

Answer: On January 3, 1990, new fees were instituted in the Mining Law Administration Program. At that time, the Bureau started collecting a nonrefundable filing fee of $5 for each claim listed on an annual filing. As a result of an analysis of the processing costs, the Bureau found that it costs about $7.50 per claim to process an affidavit of assessment work or notice of intent to hold. Because of the benefit to the public for the maintenance of these records, the Bureau felt a portion of the recording program costs should not be recovered from filing fees.

14. Question: What is the rationale for charging a user fee that is four times the cost of the service?

Answer: The $100 holding fee is designed to replace the current requirement that $100 worth of labor or improvement be invested to maintain a mining claim. The proposal has several objectives. Not only is intended to increase revenues to the Treasury, but also to reduce unnecessary environmental degradation that is done solely to maintain a claim and at the same time fund the BLM Mining Law Administration Program in lieu of a direct appropriation.

15. Question: What is the status of the legislative proposal?

Answer: The proposal is included in the appropriation language proposal currently before Congress.

16. Question: If it is not enacted, how much money would you need to conduct your mining law administration program?

Answer: If the proposal is not enacted, the Bureau would require $12 million to be appropriated in the "Management of Land and Resources" account for various surface management, compliance, and monitoring activities. In addition, the Bureau would continue to collect approximately $5-$6 million in various fees which would support activities related to recordation and processing of claims.

17. Question: The hardrock mining program is particularly susceptible to problems in controlling surface disturbances. Last fall you took steps to lessen risk. What are the highlights of these actions? What other improvements do you plan?

Answer: On October 23, 1989, the Bureau issued 4 instruction memoranda to all field offices intended to strengthen the surface management program for hardrock mining activities. Briefly, the instructions featured establishment of a mandatory inspection schedule for all operations, set forth new documentation and case file management standards, and created a mechanism for information transfer within the Bureau through establishment of Surface Management Assistance Teams.

Coal Management

18. Question: How did you determine your coal leasing funding needs for FY 1991?

Answer: The Bureau determined its program workload and funding needs for all programs including coal leasing through a systematic

analysis of identifying new or changing issues, trends, workloads, new directions, and funding requirements needed to accomplish its programs. This determination included submissions from BLM Field and State Offices of their anticipated workload and funding needs; an analysis by the Headquarters Office of these submissions, relating them to overall priorities, funding needs and constraints; and development of the Bureau's budget proposals for review by the Secretary and OMB. This process begins more than 1 year before the submission of the President's Budget to Congress and almost 1 3/4 years before the beginning of the fiscal year in which funds are needed. Therefore we are making projections into the future based on the information available at that point in time. Forecasting future events is not an exact science and conditions do change over time.

19. Question: What will be the basis for allocation of coal leasing funds for FY 1991?

Answer: After the Department's FY 1991 budget is enacted into law, funds will be provided first to field offices for inspection and enforcement, and management of existing leases. Remaining funding will be allocated for coal leasing and distributed to State Offices with specific leasing needs and with more going to States with the greatest need.

20. Question: If an additional (previously unknown) need surfaces, how will the need be met?

Answer: Should such a need occur, we will first determine if it must be undertaken this year and if so it can be met by retaining priorities and deferring lower priority work within the coal program. If the need cannot be met in that fashion then a reprogramming of funds may be required. The Department retains the option of seeking reprogramming approval if that becomes absolutely necessary.

Lands

21. Question: It is my understanding that your budget request to the Secretary of Interior for the Lands, Realty, and Rights-of-Way program was $30.8 million and yet the budget request that we are reviewing is for only $24.1 milion. What would you have done with the additional $6.7 million that was denied?

Answer: The additional $6.7 million requested to the Department was justified on the basis of the following items:

$2,000,000 was requested for realty actions to support land exchanges, including State exchanges in Idaho, Montana, and Utah, and other exchanges in Arizona, California, Montana, New Mexico, and Oregon. The increase would permit us to accumulate additional 200,000 acres of exchanges in support of recreation and wildlife initiatives and in response to State and local government and private sector requests.

$2,500,000 was requested for land use authorizations, sales, desert land entries, rights-of-way, trespass abatement, response to community expansion needs, and R&PP landfill site management, such as replacement, closure, and compliance maintenance of existing sites. Accomplishment of additional lands and realty actions would better serve public needs and reduce case backlogs.

$2,200,000 was requested for the operation, and maintenance of the basic public land records system for the Federal Government, and for response to public requests for access to our copies of the Public Land records.

Forest Management

Your FY 1991 budget justification proposes a reduction of $106,000 in Forest Management to be achieved by reducing the timber volume to be offered on public domain lands for sale in FY 1991 by 3 million board feet. The proposed offering level would be 60 million board feet.

22. Question: For the record, please provide proposed offer volumes by state for FYs 1989, 1990, and 1991.

Answer: Timber sale volume offerings by state for FYs 1989, 1990, and 1991 are as follows:

	1989	1990	1991
California	11.6	11.0	6.5
Colorado	2.9	3.5	3.1
Idaho	12.1	13.5	13.6**
Montana	7.4	7.5	10.3
E. Oregon	21.5**	19.8**	16.2
Wyoming	7.5	7.5	10.3
Total	63.0	62.8	60.0

** Temporary increase due to bark beetle salvage.

23. Question: Have you detected any change in market conditions associated with BLM-managed lands in California, Colorado, Idaho, Montana, Eastern Oregon, and Wyoming as a result of the reduced timber supply in the Pacific Northwest?

Answer: Yes. All states expect more timber sale demand and higher values. Selling prices on recently sold timber sales are running from 3 to 13 times the appraised values whereas, they normally run from 1 to 3 times we appraised value. Notable increases have been observed in Oregon, California, Idaho, and Montana. This appears to be a direct reflection of reduced availability of logs in western Oregon, Washington, and California. Market conditions are also changing as a result of:

o Qualified bidders with longer than normal hauling distances and more active bidding.

o Reduced offerings as a result of the Forest Service. Forest Plan revisions and appeals are creating log shortages in many parts of the intermountain west, increasing the demand for BLM sales; and

o Fire and insect killed timber is selling for premium prices.

Last year your budget justification stated that the allowable sale quantity (ASQ) was 85.8 million board feet. This year the ASQ has dropped to 76.0 million board feet.

24. Question: Why is there a change of 9.8 million board feet from last year?

Answer: The ASQ for the PD lands dropped from 85.8 MMBF in the 1990 Justification to 76 MMBF in the 1991 Justification.

The PD commercial forest land (CFL) base is constantly changing due to availability of new information, land status changes because of in-lieu-selections, exchanges, etc., and from changes in resource management planning decisions.

The 9.8 MMBF reduction in ASQ from the 1990 Justification to the 1991 Justification is primarily the result of resource management planning decisions. Land use plans are continually being completed or updated and the increasing demands and consideration for other resource values in order to accomplish a wider variety of multiple-uses, affects the CFL acres available to produce commercial timber.

Specific changes are noted by state as follows:

California	- 9.1 MMBF
Colorado	+ 1.9 MMBF
Idaho	+ 0.5 MMBF
Montana	- 3.0 MMBF
E. Oregon	- 0.1 MMBF
Total	- 9.8 MMBF

25. Question: Why is 60 million board feet proposed to be offered instead of the ASQ level?

Answer: The full allowable sale quantity has not been proposed for offering because:

- o Limited funding targets did not provide adequate ability to offer any additional volume in addition to providing for an overall balanced program. This balanced program also includes reforestation, both current and backlog in addition to meeting the increasing public demands in the woodland products program.
- o Other resource value considerations such as wildlife and recreation have in some cases shifted emphasis toward other land use resource values. This directly impacts land use allocations. As an example, California expects timber offerings to be cut significantly in response to the need to protect spotted owl habitat.
- o ASQ levels are being re-evaluated. They must periodically be adjusted to reflect modifications for various changes in land use such as land tenure adjustments and exchanges, old growth set-asides, wilderness study areas, and designated northern spotted owl habitat.

26a Question: Timber sales are prepared several years before offering them for sale. What volume of timber is being prepared for offering in FY 1992? In FY 1993? In FY 1994?

Answer: The States are generally doing field work on sales one year prior to offerings. At this time, sale preparation work is occurring on only the FY 1991 sales. They constantly try to increase this lead time and must stay ahead to secure access etc. The following estimates are based on estimated spotted owl impacts in California, and no increase in funding levels. The following are planned offerings:

1992	54.0 MMBF
1993	55.0 MMBF
1994	56.0 MMBF

On page 92, your justification states that reforestation efforts will be maintained because future harvest levels are dependent upon the continued efforts to eliminate the reforestation backlog and prevent additional backlogs from developing.

26.b Question: How many acres of reforestation backlog do you have on the public domain lands?

Answer: The total backlog acreage identified in 1985 was 20,719 acres. Since that time an additional 4,989 acres have been identified as reforestation backlog. This adjustment was due to changes in land use, updated surveys, land acquisitions and disposal, establishment of natural regeneration, changes in stocking standards, plantation failures, and unresolved land use issues such as wilderness study areas. The adjusted reforestation backlog base acreage is therefore 25,708 acres. There have been 6,732 acres reforested and 1,269 acres withdrawn from the harvest base as of January 1990 leaving a remaining backlog of 17,707 acres. Of this total there are 6,450 acres which are presently awaiting land use decisions which may change their backlog status. The majority of this remaining acreage is concentrated in three states, Montana, Idaho, and California.

26c. Question: How much is addressed annually?

Answer: The average annual accomplishment for each of the last five years:

1300 acres of backlog reforestation
700 acres of current reforestation

FY 1991 Wild Horse and Burro Program

In FY 1987 BLM's removal costs were $1.9 million, in FY 1988 removal costs were $2.0 million, and in FY 1989 costs were $2.8 million. While the expenditures increased, the number of animal removals decreased - going from 10,126 in FY 1987, to 8,320 in FY 1988, and to 5,200 in FY 1989. More specifically, the removal cost per animals went from $188 to $538.

27. Question: Why did the removal cost increase so significantly?

Answer: Removals during FY 1987 through FY 1989 are 10,126, 8,320, and 4,462 respectively. Costs for the removal program during those same years were $1.90 million in FY 1987, $1.73 million in FY 1988, and $1.37 in FY 1989. The cost of the removal program in FY 1989 previously reported by the Bureau was premature. Using the current amounts the average per animal removal costs are $187, $208, and $307 for FY 1987, 1988, and 1989. A protest filed with the Interior Board of Land Appeals halted a number of removals scheduled for FY 1989. As a result, only 4,462 animals were actually removed. However, a significant amount of up-front costs were incurred prior to the removals being halted. Spreading the up-front costs and the fixed cost of the removal program over a reduced number of animals removed resulted in the increased unit cost of about 50 percent from FY 1988.

28. Question: What is your estimated cost for removal (per animal) in FY 1990 and in FY 1991?

Answer: We expect FY 1990 removal costs to be very similar to FY 1989 cost per animal. Removal costs in FY 1991 will, for the first time, reflect the cost of a selective removal/fertility control program. This will include the cost of the additional number of animals gathered and released plus the cost of applying the fertility control agent. We expect the cost of the selective removal program to average near $450 per animal removed in FY 1991.

29. Question: Does your FY 1991 proposed budget of $13,548,000 provide the Bureau with the capability of removing the 8,500 excess animals in FY 1991?

Answer: The FY 1991 proposed budget will provide sufficient funding to allow capture of 4,900 animals; 4,100 of these animals will be removed. Some of the remaining 800 animals are expected to be too old or unsound to be adoptable and will be returned to the herd area where they were captured. Others of these animals will be treated with fertility control chemicals to reduce the herd's reproductive rate and returned to the herd area.

30. Question: We have reason to believe that there may be a funding problem with FY 1991 request for animal removal. Would you look into this for me and provide a written response for the record?

Answer: Development of the FY 1991 budget started in early 1989. Since that time, the wild horse and burro situation has changed considerably. During this period, a number of protests against removal plans, specifically in Nevada, were filed. This reduced the number of animals removed in both FY 1989 and FY 1990 resulting in the wild horse and burro population increasing from 42,350 animals at the start of FY 1989 to an estimated 49,000 animals at the end of FY 1990. This larger than expected population combined with significantly higher costs for sanctuaries, prison training, removal, and adoptions has impacted our capability to remove and dispose of enough animals to maintain a static population. With the FY 1991 funding level and the requirements for more data gathering before removals, the wild horse and burro population is expected to increase to an estimated total of 53,800 animals at the end of FY 1991.

31. Question: Does the BLM have or is it developing a long-term strategy for resolution of this problem?

Answer: To maximize the use of the adoption program and reduce long-term holding of animals in facilities, the BLM will initiate a selective removal program in FY 1991. Under this program, only the younger, adoptable wild horses gathered from the range area will be removed entirely. Older, unadoptable animals gathered in roundups will be returned to their herd areas. Fertility control measures will be administered to selected females to suppress the rate of reproduction before their return to the herd area. Removal costs are expected to increase by about $100 per animal under this program because of additional handling, transportation, and fertility control treatments at the capture site.

Nonetheless, this program promises long-term removal cost savings when compared to the existing program where unadoptable animals are held until their death in sanctuaries.

32. Question: At this funding level, when do you anticipate reaching the appropriate management level?

Answer: Reaching the appropriate management level (AML) is complicated by the recent IBLA decision concerning the BLM's removal plans. We expect the AML to be near the present estimated AML of 30,000 animals. The FY 1991 funding level provides for capture of 4,900 animals and removal of 4,100 animals. This level of removals is not sufficient to maintain a stable population nor to reduce the population numbers on Public Land. Reaching AML by removals depends on a number of factors including the impacts of other parts of the system such as adoption demands, training in the prison program, the effectiveness of fertility control, etc., that at present we cannot accurately predict when the AML would be reached at the current funding level.

33. Question: What has been the effect of the Interior Board of Land Appeals (IBLA) decision with regard to removals?

Answer: The IBLA decision requires that additional data be gathered prior to establishment of AML's on some herd management areas. This process could take up to 5 years on some areas. For FY 1991 BLM expects to have the required data to meet the planned removal target of 4,100 animals indicated in the 1991 budget request.

34. Question: What is the new standard required as a result of the IBLA decision that is now a prerequisite to allowing removals?

Answer: The BLM's policy prior to the IBLA decision was to establish each herd management area's AML through the land use planning process using the best available data. In some areas on which to base an AML current data were lacking. Under those circumstances, an interim AML was set at the number of animals that were on the herd management area when the plan was written. Resource monitoring would then be initiated which could be used to establish a more definitive AML. During the intervening years, some wild horses and burros were scheduled to be removed to maintain the population near the interim AML, and to maintain a stable baseline of wild horse and burro, livestock, and wildlife grazing use. The IBLA decision stated that removal of animals to maintain the population near this type of interim AML was not consistent with the Wild Horses and Burros Act. The decision further stated that current data must be available to show that "removal is necessary in order to restore a thriving natural ecological balance and prevent a deterioration of the range threatened by that overpopulation." The net effect of this decision was to delay some removals until new data could be collected and to increase the total amount of monitoring that would be needed in the future.

35. Question: How many horses have been removed since the IBLA decision and from where?

Answer: A total of 4,248 wild horses have been removed since the IBLA decision (June 6, 1989 through May 8, 1990) in the following States:

Arizona	7
California	628
Colorado	129
Idaho	190
Montana	65
Nevada	2,477
New Mexico	1
Oregon	309
Utah	200
Wyoming	242

36. Question: What areas are now restricted as a result of the IBLA decision?

Answer: Removals are not restricted in any areas if current data are available showing that "removal is necessary in order to restore a thriving natural ecological balance and prevent a deterioration of the range threatened by that overpopulation." In addition, the BLM may continue to conduct removals in areas where: court orders require maintaining a specific population level; wild horses have expanded to public lands outside of herd areas; when removal is requested by private land owners; and where emergency situations necessitate removal to maintain animal health or safety.

37. Question: What is the timeframe for completing the revised herd management plans in those areas?

Answer: Because herd management plans (HMAP's) are not necessary to remove animals where current data supports removal, no timeframe has been developed for completing HMAP's. However, HMAP's are useful in developing well coordinated management strategies for each herd area; therefore, the BLM will develop new HMAP's as rapidly as staffing and funding allow.

Mr. Jamison, for FY 1990 this Committee directed BLM to expand its adoption efforts to place healthy animals in private care.

38. Question: How have you expanded your adoption program? What measures have you undertaken to increase the adoption rate?

Answer: The Bureau has increased the capacity of the prison training program to enhance the adoptability of older but otherwise sound animals. In addition, we have increased the number of contracts with the private sector to allow more animals to be adopted in the eastern and south central States. We have provided additional money for advertising when public service announcements are not effective or available.

39. Question: How many animals were adopted in FY 1987? In FY 1988?

Answer: The BLM was able to have a total of about 12,800 animals adopted in FY 1987. About one third of this total were at regular fees and the remainder were at reduced or no fee. Almost 11,000 animals were adopted in FY 1988, nearly half at regular fee.

40. Question: On page 98 of your budget justification, it states that the adoption level was 5,900 animals in FY 1989. Why is it expected to drop to 5,400 in FY 1990 but then increase to 6,100 animals in FY 1991?

Answer: The adoption figures in the FY 1991 budget justification are an estimate and were developed before the actual number of animals adopted in FY 1989 was compiled. Due to the protests on our removal plans, only 5,220 animals were actually adopted in 1989, 700 less than anticipated. The FY 1990 removal rate is lower because about 30 percent of the animals expected to be removed in FY 1990 are expected to be unadoptable and would go to sanctuaries. In addition, the prison program was to be expanded and some of the animals captured late in the year would remain in prison facilities pending adoption in the next fiscal year.

With the selective removal policy proposed in FY 1991, virtually all of the animals removed in 1991 would be adopted. Additionally, almost 1,000 of the animals that entered the prison program in FY 1990 would be adopted in FY 1991. These changes account for the majority of the increase in adoptions for FY 1991 shown in the Budget Justifications.

41. Question: Mr. Director, I believe you have expressed an interest in sending wild horses to underdeveloped countries. Is that correct?

Answer: Secretary Lujan has directed the BLM to investigate what steps would be necessary to allow the transfer of some excess wild horses to underdeveloped countries.

42. Question: Are you presently considering such an endeavor? If so, please explain to the Subcommittee what actions you have considered and taken to date.

Answer: First, we identified two different approaches that could authorize such transfer. One was to find an existing treaty broad enough to allow inclusion of provisions to guarantee humane care of the animals for the 1-year period required before the United States can transfer title to the animals to the adopters. We did not find any appropriate treaty.

The second approach would entail amending the Wild Free-Roaming Horse and Burro Act to allow the Secretary to transfer excess wild horses and burros to underdeveloped countries under certain circumstances. This approach is the one now under consideration.

43. Question: We have received information that leads us to believe that such adoptions might violate the Wild, Free-Roaming Horses and Burros Act. Would this action violate the Act? If not, why?

Answer: The Department of the Interior's Solicitor agrees that foreign adoptions would violate the Wild Horses and Burro Act as presently in effect, unless treaty arrangements were in place to permit the Secretary to meet his statutory obligation to "assure humane treatment and care" for the adopted animals.

44. Question: Why is BLM reconsidering a proposal to deliver wild horses to Mexico when such a proposal was considered and abandoned about 4 years ago?

Answer: This proposal is being reconsidered now for the following reasons:

1. Several Latin American countries have recently expressed renewed interest in receiving excess wild horses.

2. This action would provide a measure of assistance to less developed countries.

3. We feel it is appropriate to give consideration to any initiative that could reduce program costs while still providing appropriate homes and proper care for the horses.

45. Question: How would these animals be used by developing countries?

Answer: Uses could vary, depending on the specific proposal from each country. Generally, however, based an information provided us, the horses would be used by individuals for farming and transportation.

46. Question: Both the Wild Horse Act and the Interior Department's regulations contemplate that an adopter of wild horses will be a citizen or lawful resident of the United States, and that the animal will be maintained within its jurisdiction. The Bureau's recent draft adoption manual makes these express requirements for the approval of an adoption application. Enforcement of the Act would be impossible otherwise. Many developing nations have poor records concerning animal abuse. What assurances does BLM have that these animals would be treated humanely?

Answer: Actually, neither the Act nor BLM's regulations address the question of where the adopter lives and maintains the animal. However, BLM policy requires an adopter to be a resident of the United States or its territories, for the reason noted in your question, i.e., enforcement of the terms of the adoption agreement. Legislation authorizing foreign transfers would have to include a provision addressing the kinds of assurances that the receiving country must make prior to transfering any wild horses to the care of its citizens.

47. Question: Why is BLM considering this when Eastern adoption centers do not have horses available for adoption?

Answer: We believe the current disruption of the flow of animals for adoption in some areas is a temporary problem. We anticipate that by FY 1992 the number of excess wild horses which we must place in private care will exceed our adoption capability. Transferring wild horses to other countries could provide a cost-effective way to place additional wild horses in adoptive care.

48. Question: Can you update us on what is happening with the two wild horse sanctuaries?

Answer: As of the end of the last reporting quarter (March 31, 1990), the South Dakota sanctuary held a total of 1,755 wild horses and the Oklahoma sanctuary held 1,330 horses. Both operations are running smoothly.

49. Question: Will the sanctuaries be at their capacity level at the end of FY 1990?

Answer: As a result of lower than planned level of removals in 1989 and anticipated lower level in 1990 it is estimated that through the remainder of this fiscal year less than 400 head of horses will be sent to sanctuaries. Consequently, there would be capacity for an additional 550 to 600 head in FY 1991.

50. Question: What are your plans for the third sanctuary?

Answer: We do not believe that, it would be appropriate to establish a third sanctuary until the first two have demonstrated their financial self-sufficiency. To alleviate the need for additional sanctuary space, the BLM plans to explore other management alternatives such as selective removals and fertility control.

In the selective removal of excess animals as is proposed in the 1991 President's Budget request unsound horses and those 10 years of age and older would be released back on the range rather than sent to a sanctuary. This approach can also be combined with fertility control treatments to reduce the rate of population growth of the free-roaming herds. These management practices hold promise for reducing or eliminating the number of unadoptable wild horses removed from the range.

51. Question: Page 95 of your budget justification states that the BLM's present sanctuary policy is to monitor the two existing sanctuaries to determine their success at raising the funding necessary to become self-sufficient. Would you explain how they are to become self-sufficient?

Answer: The sanctuary operators, under their agreements with the BLM, are responsible for developing and implementing a fundraising strategy that will allow the sanctuaries to be completely self-sustaining after 3 years of Government funding.

52. Question: When do you anticipate that they will become self-sufficient?

Answer: We expect that the first sanctuary should become self-sufficient after its initial 3 years.

Rangeland Management

53. Question: What is your estimate of volunteer services received in FY 1989 and what was BLM's cost?

Answer: In 1989, the Bureau received approximately $6.5 million worth of volunteer services that benefited many BLM programs. It cost BLM about $585,300 to plan for, prepare and utilize these volunteer services.

54. Question: What additional services will be associated with the requested dollars and FTEs for FY 1991?

Answer: The funding requested in the rangeland program for volunteer support will be used to recruit and coordinate volunteer assistance in BLM rangeland program, including inventory, monitoring, data collection and the construction and maintenance of improvement projects, such as fences, vegetative treatments, water projects, etc.

55. Question: Besides the requested $260,000, do you have money included in your base program for volunteer services? If so, how much?

Answer: To date the rangeland management program's contributions to support the Bureau's volunteer initiative has been relatively small. Our estimate is that the base includes about $50,000.

Riparian Management

56. Question: What will be the Bureau's estimated, FY 1990 expenditures for riparian area management?

Answer: The BLM state Office's have provided an estimate that the amount to be spent in 1990 is approximately $8.1 million.

57. Question: How much is requested for riparian area management for FY 1991?

Answer: The 1991 President's Budget proposes increases totalling $550,000 for riparian area management distributed between the Rangeland Management and Soil, Water and Air programs. The 1991 Base of $8.1 million (including funds available from the Range Improvement Appropriation) plus the increase requested in the President's budget total $8.65 million planned for riparian area management in 1991.

58. Question: Please provide a table for the record that displays the funding sources for riparian area management for FY 1989 through FY 1991.

Answer: The following table provides the four major sources of funding for riparian area management for 1989, 1990 and projected for 1991.

Riparian Area Management Funding Sources
(Dollars in thousands)

	FY 1989	FY 1990	FY 1991
Rangeland Management	1,900	2,000	2,400
Soil, Water, Air Mgmt.	1,600	2,100	2,250
Wildlife Habitat Mgmt.	1,600	2,300	2,300
Subtotal MLR	(5,100)	(6,400)	(6,950)
Range Improvement	1,400	1,700	1,700
Total	6,500	8,100	8,650

59. Question: How much needed funding was identified by the riparian coordinators to meet the 1997 goal?

Answer: A 5-year needs assessment for riparian funding has been updated for FY 1991 - 1995. For this 5-year period, a total of $60.7 million was identified by BLM State Offices in order to fully implement all state office riparian area management plans Bureau-wide.

60. Question: Why were the other states able to complete their strategy plans and Nevada was not? Was it due to a lack of funds or personnel?

Answer: Over the past year BLM's Nevada office has faced some very significant challanges associated with its resource management programs. In mining law administration program, accelerated gold exploration throughout Nevada has created high priority work to identify and mitigate the impacts resulting from proposed mineral development. Additionally, the building boom experienced in the Las Vegas area (one of the fastest growing areas in the country) compounded by the listing of the desert tortoise as threatened has created a tremendous consultation responsibility for BLM Nevada, the Fish and Wildlife Service, private development, and state and local governments. The unanticipated magnitude of this work associated with other high priority work (wild horse monitoring, rangeland management, recreation management etc.) has delayed the completion of the final riparian plan.

61. Question: When can we expect the Nevada riparian strategy to be finished?

Answer: The Nevada State Director anticipates that the state's riparian strategy plan will be completed by July 1, 1990.

62/63 Question: Do you have a riparian area rating system established that is used in monitoring whether conditions have improved from one year to the next? If so, please explain the process.

Answer: Yes, the BLM has a system established to monitor riparian area conditions. A riparian area's condition is rated as "meeting objectives," "not meeting objectives," or "unknown." Riparian areas also are classified on the basis of their plant successional, or seral, stage. This refers to the natural succession of plant communities from " early" (bare soil and annual plants), to "mid-succession" (perennial grasses, young willows), to "late" (shrubs, willows, sedges, rushes), to "potential natural" (large willows, cottonwood overstroy). In many cases, riparian communities provide the greatest functional benefits when maintained in the potential natural stage. Through site-specific land use plans, BLM determines the most desirable successional stages for meeting management objectives.

64. Question: Have all your riparian areas been inventoried?

Answer: Approximately 15 percent of BLM's riparian areas outside of Alaska have been inventoried or monitored.

65. Question: If not, how many have not been inventoried?

Answer: The Bureau has an estimated total of 22,800,000 acres of riparian areas of which 22,200,000 are located in Alaska and 600,000 acres are in other states. Of the total acres, 85 percent or some 21,388,000 acres (580,000 acres outside of Alaska) have not been inventoried or monitored.

66. Question: And, if not, how can measures progress towards the 1997 goal?

Answer: In BLM's Riparian-Wetland Initiative for the 1990's the goal for riparian area management is to achieve proper management objectives on 75% of riparian areas by 1997. On most areas, this involves achieving late seral to potential natural plant succession stages. The initiative identifies the need to inventory 385,246 acres of riparian habitats over the next 5 years. It is through this inventory process that the BLM will measure its progress towards meeting its 1997 goal.

67. Question: Mr. Jamison, can you tell me what your highest priority activity for riparian management is?

Answer: The Bureau's highest priority is completing a national riparian area strategy plan that has a solid foundation of good information and that points the BLM in the right direction toward achieving our national goals. We plan to have our "Riparian-Wetland Initiative for the 1990's" completed and available for distribution by July, 1990. The BLM is already providing national leadership in riparian area management and is demonstrating that we can do the job of restoring riparian areas across the West.

Global Climate Change Research

$2.4 million increase and 2 FTEs are proposed in Soil, Water, and Air Management funds for the Global Climate Change Research.

68. Question: Is the Bureau of Land Management a member of the Committee on Earth Science?

Answer: No. The Bureau of Land Management (BLM) and the other Interior bureaus are represented on the Committee on Earth Sciences by the Department of Interior's representative, Dr. Harlan Watson.

69. Question: Please explain BLM's role in relation to other agencies that are assigned responsibilities for global change research.

Answer: The BLM will coordinate global climate research efforts with the Committee on Earth Science and will build on existing and new cooperative agreements with other Interior bureaus, the Forest Service, the Environmental Protection Agency, other Federal agencies, the academic community, and other research organizations. The BLM recently held an interagency meeting to identify coordination opportunities and will be participating in similar coordination meetings being held by other agencies over the next several months.

70. Question: What unique qualifications does the Bureau have in this, and what have you been involved with in the past?

Answer: The unique qualifications that the BLM has to offer in the area of global change research derive from the great expanse and diversity of the lands it manages. The BLM personnel are responsible for the conservation, development, and management of the natural resources on about 270 million acres of Public Lands, primarily in the Western United States and Alaska. The great physical and biological diversity of this large geographic area places the BLM in the unique position of being able to conduct research studies and practice the management of natural resources at all spatial scales from large ecoregions to micro habitats and from totally protected wilderness areas to intensely managed forests and rangelands. The ability to control and manage these lands will help to distinguish the regional and local influences of man's activities from those of potential global change and natural forces.

71. Question: What kind of global change issues have you been involved with in the past?

Answer: A number of BLM research and monitoring studies have previously been listed by the Committee on Earth Sciences as "contributing" studies. These include: Acid Rain monitoring at 16 sites in 9 Western States for 10 years in conjunction with the National Acid Precipitation Assessment Program the Snake River Birds of Prey Area ecosystems and species specific research and monitoring over a 10-year period; Remote Automatic Weather Stations (RAWS) provide real-time weather/climate data from over 300 stations in the Western United States; and other studies that include riparian area and desertification studies in arid ecosystems.

72. Question: Page 111 of your budget justification states that long-term monitoring and study (30-50 years) are anticipated beyond this initial 5-year effort. Is this the level of funding that will be requested for the next 5 years?

Answer: The funding levels for the initial 5-year global change research effort will be determined through the Department annual budget development in concert with recommendation from the Committee on Earth Sciences.

73. Question: If not, what would be your participation in future years?

Answer: Given the long time frame in which the effects of global change are anticipated to occur, limited periodic monitoring at key sites established during the initial 5-year study period would be expected to continue over the following 30-50 years.

Wildlife Program

74. Question: Do you believe the money in the Department's submission, that OMB chose not honor, could be used effectively?

Answer: Additional dollars could be used to provide increased management capability for a wide variety of Threatened and Endangered (T&E) and sensitive species issues; wetland/riparian area management; fisheries management; and general wildlife habitat management, maintenance and improvement. They were not deemed of high enough Administration priority to be included in the President's Budget request.

75. Question: How much of the $34.0 million of the Department's request would be used for funding on-the-ground biologists? How many additional FTEs would this represent?

Answer: The Department's request to OMB for Wildlife and Fish Habitat Management included 592 FTE for additional biologists as well as associated managerial and technical support staff needs.

76. Question: How were the goals and objectives for each State Fish and Wildlife 2000 plan established? Were resource requirements identified?

Answer: The goals and objectives of the various state Fish and Wildlife 2000 strategic plans were established by each BLM State Office based upon its analysis and projections regarding the nature and direction of the future program in that particular state. The State level plans represent a step-down type plan from the goals and objectives in the national Fish and Wildlife 2000 strategy and associated national plans, such as for fisheries and waterfowl. Resource needs and requirements were an integral part of the analysis leading to the establishment of goals and objectives at the State level.

77. Question: Do you know what the base program was before these initiatives were formulated?

Answer: The Bureau's base wildlife habitat management program prior to the formulation of the Fish and Wildlife 2000 strategy was approximately $15.4 million.

78. Question: Is this the basis for resource allocation?

Answer: The requirements identified to meet the goals and objectives in various State Fish and Wildlife 2000 strategic plans and national strategy plans for waterfowl, fisheries, bighorn sheep, desert tortoise, raptors, and related Fish and Wildlife 2000 initiatives will form the basis for allocation of funding in 1991.

79. Question: It is my understanding that 18 additional FTEs and a funding level of $2.8 million would be required for the Bureau to have a proactive wildlife program in Nevada. Is this an accurate assessment?

Answer: The 18 additional FTEs and funding level of $2.8 million is based upon the Nevada State Office's assessment of funding needed to achieve total implementation of it's Fish and Wildlife 2000 implementation plan. The Bureau's 1991 Budget provides sufficient cabability to fund the highest priority wildlife habitat needs in Nevada.

80. Question: Are other States having such difficulty?

Answer: The Bureau's 1991 proposed wildlife habitat management budget provides sufficient capability to fund the highest priority wildlife habitat needs in all BLM State Offices. It is a fully adequate level to implement our objectives in an efficient, phased annual program increment.

The involvement of private and state organizations in the management of wildlife resources is critical to the future of Nevada and the Nation's wildlife heritage. The Bureau has been actively involving these groups when and wherever possible, at a great savings to the government. As you are aware the "challenge cost-share" program is specially identified money, where theoretically, one dollar is added to your budget for every dollar brought in from non-federal sources.

81. Question: Please describe your challenge cost-share programs for FY 1989 and FY 1990. What was the funding levels for these years? How many non-federal dollars were available for matching for each of these years?

Answer: In 1989, $1,500,000 was provided for challenge cost share projects and the program included over 60 projects with almost $2,000,000 in state and private funds provided to match BLM funds.

In 1990, $2,000,000 was appropriated, which is being matched by approximately $2.5 million from state or private funds and will fund over 75 projects.

The challenge cost share program has provided a vital boost to the Bureau efforts to implement on-the-ground projects. This support and involvement by outside contributors has resulted in the improvement of thousands of acres of habitat for a variety of fish and wildlife species.

82. Question: Does your FY 1991 budget request contain adequate funding to match potential non-federal monies?

Answer: The 1991 President's Budget contains $2.5 million for challenge cost share, which is an increase of $500,000 over the 1990 appropriated amount. Although no requests have been made yet to non-federal cooperators for 1991 potential matching funds, generally, there has been more than enough matching fund proposals from outside groups to match the appropriated funds. There is no reason to believe that this trend will not continue.

83. Question: If not, what is your estimate of non-federal funds that could be contributed for challenge cost-share projects in FY 1991?

Answer: If the same level of proposed contribution, is offered in 1991 as was indicated in 1990, the BLM could potentially be offered about $4 million of non-federal matching fund for wildlife challenge cost share projects.

84. Question: How many dollars do you have in your FY 1991 budget for the challenge cost-share program?

Answer: The 1991 President's Budget proposes a total of $2.5 million for challenge cost sharing in the wildlife and Fish Habitat Management Program an increase of $500,000 above the 1990 appropriated amount.

Desert Tortoise

85. Question: What are the implications of the desert tortoise listing for your agency.

Answer: The listing has caused additional requirements to comply with the provisions of the Endangered Species Act (ESA). One of these is that the BLM consult with the Fish and Wildlife Service on all Federal actions that are likely to adversely affect the tortoise or its habitat. This requirement takes considerable effort in areas where the tortoise occurs, to analyze proposed actions and develop mitigation measures to ensure that the tortoise is protected.

The Bureau has also been involved in developing and implementing management for the desert tortoise and its habitat for several years. The listing has several effects on these efforts. Initially more attention will be directed to developing cooperative programs with other Federal and State Agencies. There will be more cooperative efforts in directing and carrying out research on the respiratory disease that is affecting tortoise populations and in evaluating the effects of livestock grazing on tortoise populations.

I understand an agreement between the Bureau of Land Management, the Fish and Wildlife Service, the Nature Conservancy, and the Southern Nevada Homebuilders Assn. is in place to protect the desert tortoise habitat surrounding Las Vegas.

86. Question: What measures have been taken that will protect the tortoise and, simultaneously, will permit home building?

Answer: The Endangered Species Act prohibits the "taking" of listed species on private lands without a permit. A permit for a specified level of taking can be issued by the FWS if the private parties involved prepare a Habitat Conservation Plan (HCP). The BLM, FWS, TNC, Nevada Department of Wildlife, and others have entered into an interim agreement with the Homebuilders Association that will allow homebuilding to continue pending the completion of the HCP. The FWS has issued a permit to the Homebuilders that allows removing tortoises from habitat areas scheduled for housing development. In conjunction with this permit the Homebuilders are providing funds to conduct research on desert tortoises. The funds have been made available and efforts are being directed toward implementing the research. Home construction is continuing in the Los Vegas area.

87. Question: Are similar arrangements needed outside of the Las Vegas area?

Answer: There may be some areas scheduled for development on private lands elsewhere. This could involve areas such as Laughlin, Nevada, where there is considerable ongoing development, or new agricultural development in the western Mohave desert. In these areas it will be necessary for the private parties to obtain a permit from the FWS if tortoises will be "taken" from the site.

88. Question: If so, is it practical to make comparable agreements?

Answer: Yes, it is both practical and possible under the ESA.

89. Question: If not, why?

Answer: There has been some concern expressed by private parties about the expense of maintaining large populations of tortoises in captivity. However, the Las Vegas situation was unique relative to large number of tortoises and the high value of the habitat, and it is doubtful if there would be similar conditions in other areas.

Cultural Resources

An increase of $1.6 million and 16 FTEs over the FY 1990 enacted level is requested for cultural resource activities.

90. Question: What would these 16 people do that is not being done now?

Answer: The bulk of the requested FY 1991 cultural resource program increase will be targeted for implementation of the 1988 amendments to the Archaeological Resources Protection Act (ARPA). Personnel increases would be used to conduct inventories in the most critically threatened areas where significant cultural resources are presumed to exist, expand public education, develop additional partnerships and challenge cost share projects, and develop a violation tracking system.

91. Question: How are the highest priority cultural resource projects or the most critical areas determined?

Answer: The management commitments and the decisions on which priority cultural resource projects are to be funded and which critically threatened areas need to be inventoried is made through the BLM's comprehensive land use planning process, specifically, in resource management plans (RMP). The cultural resource documentation that provides the basis for the RMP decisions are obtained through Class I cultural resource inventories.

92. Question: The challenge cost-share program has been an increasingly popular program since it helps stretch scarce federal funds and actively involves the private sector. Page 133 of your budget justification states that an expanded challenge cost-share program will be used for additional inventory and evaluation work. How many dollars are being used in FY 1990 for the challenge cost-share program for cultural resource projects? What would your total program be for FY 1991?

Answer: In FY 1990 we anticipate that at least $165,000 will be allocated to cultural resources challenge cost share projects. In FY 1991, we estimate that roughly $400,000 will be allocated to challenge cost share projects and that this will yield benefits of a least $1.5 million.

93. Question: How many proposals do you have for matching funds from the private sector?

Answer: In FY 1989, BLM undertook a total of all cultural resources challenge cost-share projects, most of which were long-term projects which are expected to continue into FY 1990 and 1991. The President's Budget request would allow continued funding and expansion of these efforts as well as additional agreements with other universities and archaeological societies.

94. Question: Would this increase, along with your base program, enable BLM to be in compliance with all the Archaeological Resources Protection Act requirements? If not, please explain what requirements would not be met.

Answer: As required by the Archeological Resources Protection Act amendments, the requested increase would allow BLM to initiate a program to develop plans, prepare a schedule and conduct inventories to locate archaeological resources subject to illegal excavation and artifact theft; to initiate a program to increase public awareness; and to document and track violation incidents. Toward this end, approximately 25,000 acres of additional inventory would be conducted and baseline condition data would be collected for an additional 350 sites.

95. Question: Is vandalism of cultural resource sites increasing or decreasing? If increasing, how does the BLM plan to address the statutory requirements?

Answer: The damage to sites by casual collectors and careless vandals is decreasing as a result of more active education and interpretive efforts and additional archaeological public involvement projects. Destruction of cultural resources from commercial pothunters and collectors has remained relatively unchanged. We plan to continue our aggressive public awareness work and expand the interpretation of archaeological sites. To combat theft and commercial exploitation of archaeological resources, we will continue law enforcement efforts begun in FY 1990 which focus on investigations, surveillance and undercover operations.

96. Question: You are requesting an additional $260,000 and 2 FTEs for enhancement of volunteer assistance in the cultural resources area. Describe the work that two additional people would do?

Answer: In FY 1991, the additional personnel would be used to seek out additional volunteers, develop new cooperative agreements with volunteers, develop new cooperative agreements with volunteer organizations, and expand projects on the Public Lands where volunteers could productively be used. The additional personnel would also be used to develop and implement training of volunteers.

Recreation Management

One of the major objectives for Recreation Resources Management in your budget justificatiion (Page 140) is to expand and strengthen partnerships with other Federal, State, and local agencies and the private sector. These partnerships are intended to enhance the outdoor recreation opportunities offered on and adjacent to the Public Land, and maintain cooperative relationships with national, State, and local tourism entities to strengthen local economies through tourism.

97. Question: Please give us some examples of activities that you are involved in which meet this objective.

Answer: Some examples of partnerships with other Federal, State and local agencies and the private sector are:

Back Country Byways - State and local governments are involved in committees to screen and recommend Byways for National designation. The State of Utah has funded a statewide publication on Byways and other States have funded designation activities and publications. Two companies, Farmer Insurance Group and American Isuzu Motor Corporation, have become corporate sponsors of the program.

Tread Lightly - This is a program jointly sponsored by the BLM, the Forest Service, conservation groups and the automobile industry to promote the responsible use of four wheel drive vehicles.

Arkansas River - The river is jointly managed by the State of Colorado and the BLM to improve efficiency and consistency of management.

98. Question: Does BLM have a challenge cost-share program established for Recreation Resources Management? If so, how many dollars do you have in your FY 1990 program?

Answer: The BLM initiated a pilot cost-share program in recreation management in 1989, and expanded the program in 1990 to encourage private contributions for high priority maintenance and improvement of recreation resources. In 1990, the BLM plans to devote about $500,000 in recreation resources management to the challenge cost share program.

99. Question: What amount of matching funds are available from outside sources for FY 1990?

Answer: In FY 1990, the BLM expects to receive about $900,000 worth of private contributions for potential challenge cost-share projects.

100. Question: What is your estimate of matching funds from outside sources for FY 1991?

Answer: In the 1991, the BLM will expand funding for the recreation challenge cost share program to approximately $600,000 to accomplish additional on-the-ground projects. We expect to receive about $1 million in matching funds, labor and materials from civic groups, user groups, businesses and local public agencies to improve management of recreation resources and facilities.

101. Question: BLM has some recreation facilities that are located quite a distance from the administering office. Do you have cooperative agreements with other Federal and State agencies to manage each other's recreation facilities when such an operation would prove to be cost effective? If not, have you considered such arrangements?

Answer: The BLM has cooperative agreements for river management activities on the Arkansas River with the State of Colorado and with the Forest Service on the Rogue River. The Forest Service manages permits for the Sun Valley ski area in Idaho, where facilities are private and about 40 percent of the land is under the jurisdiction of BLM. There are many other examples of cooperative effort in BLM's management activities. Opportunities are more common for cooperative efforts in recreation resource management activities than in facilities maintenance. Frequently, when facilities are remote from BLM offices, they are also remote from the offices of other agencies. We are, however, constantly looking for opportunities to improve efficiency in the management of our facilities.

Wild and Scenic Rivers

Mr. Jamison, within your FY 1991 base program the BLM plans to conduct inventory and complete studies for approximately 15 potentially eligible Wild and Scenic Rivers segments.

102. Question: How does BLM determine which segments to study for potential inclusion in the Wild and Scenic Rivers System?

Answer: Inventory and identification of potentially eligible WSR river segments is conducted as part of BLM's land-use planning process. After potentially eligible river segments are identified through inventory, eligibility for recommendation is evaluated and determined based on the criteria established by the Wild and Scenic River Act of 1968. To be eligible, a river must be free-flowing and have at least one outstandingly remarkable value.

103. Question: Do you have more than 15 segment nominations for study in FY 1991? If so, how many?

Answer: Within the 1991 request level, the BLM will conduct inventory and complete studies for approximately 15 potentially eligible river segments.

104. Question: Describe the necessary steps for designation after BLM's studies are complete.

Answer: Eight separate steps are involved in the designation process as follows: 1) inventory to identify potentially eligible segments; 2) determination of eligibility based on the criteria established by the Wild and Scenic River Act of 1968; 3) tentative classification of each segment as either wild, scenic or recreational so identified values can be protected until formally designated by Congress; 4) study to determine the suitability of particular segment for inclusion in the National Wild and Scenic Rivers System and development of recommendations through the BLM's RMP/EIS process; 5) preparation of legislative reports, legislative EISs, and transmittal documents; 6) activity plan preparation and boundary determination; 7) final classification and designation by Congress; and 8) activity plan implementation.

Recreation Fees

You are estimating that $1.2 million will be collected from recreation permits in FY 1991. The receipts from recreation fees are available to BLM to cover recreational management and maintenance costs.

105. Question: Are the receipts returned to the area where they are collected?

Answer: Fees collected from users of recreation sites are deposited to a special account in the Treasury and are available for use by BLM subject to appropriation by Congress in the next fiscal year. BLM allocates the appropriate funds to the BLM State Offices based on the amount of fees collected from that State. These funding are used for managing and maintaining the sites and areas which generated the fees. Funding priorities are set by the BLM field managers according to on-the-ground needs, therefore, the exact amount collected at a particular recreation site may not be actually used at that site.

106. Question: If not, please explain your rationale of why they are not returned to the area of collection.

Answer: Allocating the exact amount of receipts annually to the area of collection is not always the most efficient way to use the funds, because this approach could reduce a field manager's ability to carry out necessary work. For instance, in a particular year, it may be more efficient to pool funding to accomplish needed work in a specific area because the cost of a project needed in one area may exceed the available receipts for that area. Using the funds from other lower priority work allows critical work to be accomplished more efficiently and timely.

Back Country Byways Program

The Back Country Byways Program, which is a takeoff from the Scenic Highways Program, was a new initiative in FY 1990.

107. Question: Please briefly describe the program and tell us what your plans are for FY 1991.

Answer: The Back Country Byways program is the BLM's unique contribution to the larger National Scenic Byways program. Both are the result of recommendations in a report by the President's Commission on American's Outdoors. Back Country Byways usually traverse scenic corridors that are off the beaten path. They are existing public roads that pass through Public Land administered by BLM. We currently have 38 byways designated in 11 of the Western States. We expect to bring the total designated to somewhere between 50 and 60 by the end of FY 1991.

108. Question: How much money are you proposing to spend on the Byways Program in FY 1991.

Answer: We estimate that we will be spending approximately $400,000 on the Byways program in FY 1991.

109. Question: Is the private sector involved in this program? If so, how?

Answer: We currently have two national corporate partners, Farmers Insurance Group and American Isuzu Motor Corporation, who are assisting us in the Back Country Byways Program. For example, Farmers Insurance published a feature article in their quarterly magazine and printed 250,000 copies of a reprint for free distribution by BLM. Both partners are providing funding for the development of interpretive kiosks that will be located at the entrance to each of the Byways. Similar partnerships are being developed at the local level. For example, the local historical society is doing extensive research and is contributing funds to develop interpretive signs for the Gold Belt Back Country Byway near Canon City, Colorado.

Resource Management Plans

The FY 1991 Resource Management Planning request is for $455,000 and for 5 FTEs over the FY 1990 enacted level. You are predicting that if the FY 1991 requested level is maintained through the out-years as well, all Management Framework Plans would be replaced by Resource Management Plans by the end of 1997.

110. Question: Since more emphasis is placed on Plan monitoring and maintenance, are you discovering that some of your completed Plans need to be modified?

Answer: Nearly every plan will be amended during its lifetime to keep it current with on-the-ground conditions, or respond to newly identified proposed actions or new opportunities.

111. Question: What requirements have been established for updating existing Plans?

Answer: No specific requirements have been established beyond the guidance contained in BLM's planning regulations (43 CFR 1600) which contains the requirement to maintain and monitor the approved plans, amend them as necessary, and fully revise them when they no longer meet management needs. The BLM manual requires formal evaluation of each land use plan at regular intervals "not to exceed five years."

112. Question: Does the requested funding level allow for updates or just replacing Management Framework Plans with Resource Management Plans?

Answer: All of the plans proposed for 1991 are Resource Management Plans which replace existing Management Framework Plans. Plan amendments updates will also be completed but are funded by the program which drives the amendment.

113. Question: How are you updating the existing Resource Management Plans?

Answer: All plans (including MFPs) are maintained on a regular and continuing basis. Maintenance is limited to minor corrections, documenting newly available data, clarifications, etc., and may not change or add decisions. An amendment update is required to add or change decisions, and must follow the 43 CFR 1600 requirements for an RMP. A number of RMPs and MFPs are currently under amendment for high profile issues (e.g., fluid mineral leasing).

ALMRS

A $3.4 million increase over the FY 1990 enacted level is included in the FY 1991 budget request for the Automated Land and Mineral Records System (ALMRS) Project. The ALMRS project is to begin implementation in FY 1993. On page 175 of your justification you state that the increase is needed for an "enhanced system design" that was not included in the original ALMRS cost estimate. ALMRS has been funded as a stand-alone project.

114. Question: Has the ALMRS project been funded and on target since 1983?

Answer: Changes in the project schedule have been made at key milestones as BLM has completed automated system life cycle management analyses and obtained more experience with the process of developing major automated systems.

115. Question: It seems like there are always suggestions and tendencies to embellish or augment a project. The enhanced system design is a new wrinkle in this year's request. Please explain what it entails.

Answer: The high level design identified in the Budget submission reflects a recognition that continued development of independent computer systems to meet selected portions of the Bureau's multiple use mission would fragment BLM's automation efforts. BLM's desire is to obtain a suite of hardware and software that would provide an integrated platform of automated capability to do a variety of automated functions requred for effective public land management.

By developing these new capabilities in discrete increments based on a blueprint, BLM will be able to minimize the risks associated with both a "grand design" system (where everything works or fails as a unit) and with uncoordinated development (where little pieces of a system work but they can never be integrated). During the general system design completed in 1988-89, BLM's review of our functional automation requirements identified in the ALMRS Feasibility Study in 1986, the Automated Resources Requirements Study in 1987, and the Modernization Study in 1988 showed the value of a comprehensive design perspective. The interrelationships among data used for various BLM programs were documented more thoroughly in an "Enterprise Data Model" completed in late 1989.

116. Question: I understand a benefit/cost analysis for the expanded system has been prepared. Please provide a summary description of the enhanced system, its estimated cost, and a proposed time description for the record.

Answer: BLM's concept of an expanded system would have several four major components implemented in the following sequence:

- Administration components- In this stage, BLM would replace the Honeywell computers that are nearing the end of their life cycle. BLM's existing software used for administrative tasks (such as property management, procurement, budget, etc.) would be "rehosted" to the new Target System "platform" of hardware, software, and telecommunications technology.
- ALMRS - In this stage, BLM would automate its land and mineral records data and on to the "Target System" platform.
- Resources - In this stage, BLM would replace its existing Geographic Information System (GIS) hardware (Prime computers) and software (primarily the MOSS "family") with the "Target System" platform. GIS capabilities would be provided to most BLM offices for conflict analysis, preparation of maps, and other resource management functions.

The components would use common technology, simplifying the user interface and skills required for technical ADP operations. BLM has specified its functional requirement - what BLM will do with the Target System technology - in the Request for Proposals (RFP) but system design will be done by the winning vendor, so details about the technology will not be available until the contract is awarded.

The schedule in the Budget submission for implementing the Target System was based on the Bureau's plan to develop the integrated System. Since then we have been reviewing the scope of the project and the RFP to implement it. The schedule and FY91 funding priorities will be updated after the scope of the RFP is confirmed and a date is established for issuing it.

The management decision to proceed with the Resources component will be made after ALMRS implementation begins and BLM validates the success of ALMRS.

Costs for the development of the project beyond FY 1991 are still being determined.

117. Question: What is the status of that effort [to integrate Alaska into the field testing of ALMRS]?

Answer: BLM has modified the geographic scope of the ALMRS project to include implementing ALMRS in Alaska. ALMRS data standards have been revised to include items that are unique to Alaska programs, and conversion of existing Alaska files to the new ALMRS standards should be completed in 1990.

Testing of these data standards will be done through an "interim" software package, using BLM's existing Prime computers. Much of the actual software development has been done in Alaska for this testing. BLM will also test this software and ALMRS data standards in New Mexico and in Nevada during 1991, to provide a "Lower 48" perspective as well. A major benefit of the activities in Alaska will be the replacement of the outdated Burroughs computer and software used since the 1970's to handle land and mineral records in Alaska.

Alaska Cadastral Survey

118. Question: How many acres remain to be surveyed?

Answer: There are approximately 70 million acres in Alaska that remain to be surveyed.

119. Question: What is your timetable for completing these surveys?

Answer: Scheduling of the surveys is accomplished in accordance with the Patent Plan Process and attempt to group all survey work needed in a geographic area into a single package to be done at one time. While we hope to complete the bulk of the survey needs by the year 2005, some survey work will be ongoing as long as there are resource management programs and land status changes occuring.

120. Question: At the level of funding proposed for FY 1991, how long will it take to complete these surveys?

Answer: Assuming a continuation of the 1991 funding level for Alaska Cadastral Surveys, BLM should be able to accomplish its goal of completing the major effort of the surveys by the end of 2005.

Law Enforcement

121. Question: BLM is authorized to enter into cooperative law enforcement agreements with State and local law enforcement agencies. How many cooperative agreements do you anticipate having in FY 1991?

Answer: During FY 1991, the Bureau of Land Management anticipates having 73 cooperative law enforcement agreements in effect.

122. Question: How much of your total FY 1991 Resource Protection and Law Enforcement program would be for the cooperative agreement component?

Answer: About $1,500,000 of the available funding within the Resource Protection and Law Enforcement Program will be used for Cooperative agreements in FY 1991.

A Memorandum of Agreement was signed by Secretary Lujan and Secretary Yeutter on February 27, 1990, which allows cooperative law enforcement efforts between the Fish and Wildlife Service, the Bureau of Land Management, the Forest Service, the Bureau of Indian Affairs, and the National Park Service. These cooperative efforts will provide increased protection for the public and of our Nation's natural and cultural resources. At the same time, the sharing of law enforcement personnel should help the law enforcement dollars stretch further. I commend the Secretaries for taking this action.

123. Question: Please describe how you intend to use this new authority.

Answer: The Memorandum of Agreement (MOA) does not provide for new authority, nor is it intended to provide routine law enforcement services. The MOA provides an opportunity for the Secretary of Interior and Secretary of Agriculture, in exigent circumstances and through existing authority, to authorize law enforcement personnel to enforce applicable Federal laws and regulations in support of activities administered by their agencies when officially requested to do so by designated managers and through established procedures. The MOA was originally designed to address law enforcement authority requirements of participating agencies when providing security on wildland fires when the law enforcement officer was in another agency's jurisdiction without specific authority. The MOA covers exigent circumstances including: (1) investigative operations; (2) security of law enforcement operations during wildland fires or other major events or incidents; and (3) emergency assistance calls. The BLM will limit the use of the MOA to the envisioned activities and with any implementation occurring through the participating agency's internal procedures.

124. Question: One of the issues raised in the recent reviews of BLM's oil and gas inspection and enforcement programs is the poor coordination of theft reports between the BLM inspection and enforcement staff and the BLM law enforcement staff. Will this new agreement help you with this problem? If so, how?

Answer: The MOA does not apply to internal coordination between the inspection and enforcement and law enforcement staffs of the BLM and there are no problems in this area. The oil and gas inspection and enforcement issue involved the lack of authority for our law enforcement personnel to conduct civil and criminal investigations on oil and gas leases on Federal and Indian lands. On August 4, 1989, the Secretary authorized BLM law enforcement personnel to conduct those investigations through a change in the Departmental delegations of authority.

Facilities Maintenance

Maintenance of facilities continues to be a priority item for federal agencies. The Bureau of Land Management is requesting a $7.7 million increase above the FY 1990 level of $19.1 million. Of which, $3.7 million of the proposed increase is intended for the implementation of "Recreation 2000: A Strategic Plan." The increase would be used to decrease the backlog of recreation facility maintenance projects. I understand that BLM does not have an up-to-date or accurate appraisal of facility needs and is conducting an inventory of its facility needs at present. A ball park, backlog estimate (from several years ago) is $80 million.

125. Question: Do you have a better figure than $80 million?

Answer: Our present estimate, pending completion of the inventory and condition estimated to be included in area Maintenance Management System is that the backlog has stayed fairly constant.

126. Question: How do you know whether you are staying even on your maintenance needs or whether your backlog is being increased or is being reduced if you do not have a current inventory?

Answer: Our funding levels for maintenance have increased in response to initiatives such as Legacy 99 and Recreation 2000. In the past 5 years BLM's Maintenance funding capability has increased by nearly 63 percent. These funding increases have enabled us to improve the condition of many of our facilities. Although our national inventory system is not yet operational information from individual states offices indicates the backlog is remaining fairly constant.

127. Question: We understand that a new, automated system is being established to keep track of maintenance needs and collect inventory data. What is the status of the system?

Answer: The BLM has developed a Maintenance Management System using automated technology. Revised handbooks and computer software have been supplied to the State Offices and a training session in use of the system for state engineering personnel was held in April of 1990. All BLM State Offices have begun field collection of inventory/condition data for input into the automated data base.

128. Question: When will your inventory be completed?

Answer: Field condition survey, condition evaluation, and initial data input will occur during the 1990 field season. Survey results are scheduled to be available by the end of 1990 or early 1991. We anticipate being able to use the system to determine funding priority during development of the 19913 budget.

129. Question: Are you collecting data by kind of facility, such as recreation, roads, trails, bridges, water and sewer systems, and buildings?

Answer: Yes, we are collecting data by type of facility, specifically: administrative sites, recreation sites, roads, trails, and bridges. Appurtenant facilities such as utility systems are included as a component of the facility being inventoried.

Interagency Office Complex

130. Question: Mr. Director does this request include any funds for this project?

Answer: Funding for the Las Vegas District office interagency complex is not contained in the 1991 President's Budget. Development of this interagency proposal was not completed in time for consideration in the 1991 Budget development.

131. Question: What would be required, in terms of dollars, to implement this proposal?

Answer: The estimated design and construction cost of the Las Vegas District Office Interagency Complex is $5,060,000.

132. Question: Have you considered using the General Service Administration to construct the interagency office complex?

Answer: GSA would not be involved in construction of this facility since they must have title to the lands to spend construction money. The land upon which the office would be located is owned by BLM and Fish and Wildlife Service. GSA may have to provide fair market value compensation to BLM for the land acquired. In addition, the Fish and Wildlife Service is precluded from transferring land to another agency without Congressional approval.

133. Question: Is that a desirable alternative? If not, why?

Answer: Because of regulatory problems associated with GSA acquisition of title to the lands where the office complex would be located, GSA construction of this facility is not a desirable alternative.

Firefighting

In FY 1989 an emergency transfer of $35 million was made early in the year to cover left over FY 1988 firefighting costs.

134. Question: Was there a similar problem in FY 1990 with costs remaining from FY 1989?

Answer: Yes, $29 million of unpaid FY 1989 firefighting costs have been carried over into FY 1990. This resulted from significant suppression costs being incurred too late to be in FY 1989 transfers and thus being carried forward as FY 1990 obligations. These costs are primarily in support of other agency fire suppression efforts, most notably was BLM support to the Forest Service from late July through early

September for major wildfires in central Idaho, western Montana, and eastern Oregon.

135. Question: **If so, is this a regular occurrence that is, or should be, incorporated into planning for each year's suppression costs?**

Answer: **A review of late season firefighting costs incurred for the period 1984-1989 indicates that this has not been a regular event. This has occured at the end of FY 1988 and FY 1989 as a result of rapidly escalating suppression costs for which fund transfer projection methods have not kept up.**

The Fire Management Policy Review Team report of May 1989 calls for additional research related to fire management programs. However, the proposed firefighting budget for 1991 does not seem to include funding to conduct such research.

136. Question: What level of research is contemplated in the FY 1991 request?

Answer: The 1991 President's Budget contains funding to continue several important fire research projects. For example, BLM has an agreement with the Forest Service Intermountain Fire Sciences Lab (IFSL) in Missoula, Montana to jointly fund fire oriented research. In 1990, $25,000 was earmarked to support research on a computerized Fire Effects System that would distribute fire effects information via a computerized network to field offices. To date this system contains environmental information relating to fire effects on 250 plant species. Funding will be continued at this level in 1991 as additional plant species are included in the system. We are again requesting $25,000 for ISFL to continue research into predicting fire behavior in areas of patchy fuels which are common to BLM. Results of this research will improve the accuracy of fire behavior predictions result in more effective and efficient suppression strategies.

BLM is requesting $50,000 to continue its support of firefighting equipment research and development. Some of these funds will be transferred to the Forest Service San Dimas Technology and Development Center for improvement studies on fire suppression equipment. The remainder of the funding will be used by BLM personnel at BIFC to develop a prototype fire engine with improved suppressant foam capability.

We will also contribute funding to the Earth Resources Observation Satellite (EROS) project, co-managed by the ISFL in Missoula and NOAA. This project uses satellite imagery to measure and monitor vegetation greenness to calculate an index that is correlated to the moisture content and flammability of fuels. This project should be useful for improved fire danger rating and prepositioning of fire suppression forces.

BLM is also proposing to fund research that would strengthen our knowledge of fire history and fire effects on biodiversity of several forested and rangeland plant communities in the Great Basin.

137. Question: Have efforts been undertaken to develop the research agenda called for in the report?

Answer: Many of the Bureau's suppression research needs in wildland fire management exist in common with other Interior and Agriculture agencies. These common needs are being addressed by the wildland fire community. Of the five major research needs highlighted by the Fire Management Policy Review Team, the following three apply directly to the BLM: (1) effects of prolonged drought on fire behavior and effects; (2) inadequate analysis of fire history, occurrence, size, and effects; and (3) inadequate methods for long term weather predictions.

We are addressing the effects of prolonged drouth on fire behavior by revision of the National Fire Danger Rating System. This effort is being coordinated with the USDA Forest Service Intermountain Fire Sciences Lab in Missoula. Also, we are currently revising our Fire Behavior Analysis training course to include an analysis and review of the effects of prolonged drought.

We have addressed the fire history issue by modifying the base period for our fire planning process. Our fire planning has been based on the fire history, occurrence, and size over a seven year period. This base period is being extended to ten years and will be maintained annually.

Long term weather predictions are a particularly troublesome problem because of the uncertain, highly variable nature of weather parameters and the possible implications of global climate change. This issue is currently being addressed by the National Weather Service and the Forest Service through a project known as the Weather Information Management System (WIMS). The results of this joint effort will be adequate to meet the BLM's needs for long term weather prediction.

Land Acquisition

138. Question: When did you prepare your FY 1991 budget?

Answer: BLM began work on its FY 1991 budget in November 1988. We received the initial land acquisition project recommendations from our field offices in February 1989. The project list was sent to the Office of the Secretary of the Interior for inclusion in the total land acquisition budget request on September 18, 1989.

139. Question: Did OMB provide you criteria to rank the FY 1991 land acquisition projects when you prepared the FY 1991 budget?

Answer: The criteria used by the BLM in ranking the FY 1991 land acquisition projects were developed by the Departments of Interior and Agriculture. The OMB reviewed and provided input to the development of the criteria. The same criteria were used by all four agencies: the National Park Service, Fish and Wildlife Service, Forest Service, and the Bureau of Land Management in ranking their projects. A combined project list was prepared which listed all land acquisition projects across all four bureaus in priority order based on the uniform criteria.

Procedure for Compiling Federal Land Acquisition Priority List

I. DOI and USDA determine which proposed acquisitions meet minimum criteria. Minimum criteria (must be met in all cases):

1. The property is (a) within the boundaries of an existing Federal conservation/recreation unit, if such boundaries are set by statute; or (b) contiguous with property now comprising a Federal conservation/recreation unit, if the unit's boundaries are administratively determined; or (c) the initial "building block" of a newly-authorized Federal conservation/recreation unit.

2. The property presents no known health/safety/liability problems (e.g. hazardous waste contamination, unsafe structures).

3. There is no current indication of opposition from current owner(s) to Federal acquisition of the property (condemnations may be necessary in rare instances).

4. The cost of infrastructure necessary to make the property accessible, safe, and usable by the general public does not exceed 10 percent of the estimated purchase price.

II. DOI and USDA score proposed acquisitions that meet minimum criteria.

Each potential acquisition is scored by summing points it receives from meeting one or more of the following "ranking criteria." The indicated number of points is awarded if the proposed acquisition would:

1.a. Prevent imminent (within 2-3 years) property development that is determined by the regional or State director to be incompatible with the affected unit's authorized purpose(s). 50 points

b. Prevent short-to-medium term (within 4-8 years) property development that is determined by the Secretary to be incompatible with the affected unit's authorized purpose(s). 25 points

2.a. Provide multiple recreation opportunities (seven or more of the activities listed on Attachment A) and is within a county with a population of one million or more. 120 points

b. Provide multiple recreation opportunities (seven or more of the activities listed on Attachment A) within 100 miles of a Standard Metropolitan Statistical Area (SMSA).

c. Provide multiple recreation opportunities (seven or more of the activities listed on Attachment A) between 100 and 250 miles from an SMSA. 35 points

d. Provide limited recreation opportunities (one to six of the activities listed on Attachment A) within 100 miles of an SMSA. 35 points

e. Provide limited recreation opportunities (one to six of the activities listed on Attachment A) between 100 and 250 miles from an SMSA. 20 points

3.a. Preserve habitat of endangered species. 40 points

b. Preserve habitat of threatened species. 30 points

c. Preserve a recognized type of ecological community, for the purpose of promoting natural diversity. 20 points

4. Preserve a nationally-significant natural or cultural feature of a type not now represented in any Federal conservation/recreation unit. 40 points.

5. Preserve a biologically valuable wetland or riparian habitat. 80 points

6.a. Include existing infrastructure required to make property accessible to and usable by the general public and by elderly/handicapped citizens. 20 points

b. Include existing infrastructure required to make property accessible to and usable by the general public, but not by elderly/handicapped citizens. 20 points

7. Expand a unit with a record of visitor-day growth exceeding 5 percent per year in at least three of the five prior years. 20 points

8. Improve manageability and efficiency of a unit. 20 points

9. Result in Federal savings in acquisition costs through the use of land exchanges, donations and other alternatives to the direct purchase of a property at full value. Add five points for each estimated 20 percent savings in Federal acquisition costs up to a maximum of 25 points. 5-25 points

10. Involve Federal acquisition of less than full fee title to the property (e.g. purchases of scenic or conservation easements). 10 points

11. For each non-Federal partner (State, local, private) contributing significant resources ("significant" - at least 25 percent of acquisition, development, or management dollars), add 5 points, up to a maximum of 15 points. 5-15 points

12. Provide a Federal Land Management Agency with an opportunity judged by the appropriate Assistant Secretary to be necessary to substantially further the goals of a Presidential, Departmental, or Bureau MBO and to be essential to the fulfillment of the Agency's mission. (Each agency will rank their 20 highest priority projects which implement their MBO's and mission in descending order. The first priority project will be awarded 100 points, the second 95, the third 90, and so on). 5-11 points

Ranking criteria listed under a single number (e.g. "1.a.", "1.b.") are mutually exclusive; points may not be awarded for more than one. For example, a proposed acquisition may score 40 points for meeting criterion 3.a., but cannot score 70 points for meeting both criteria 3.a. and 3.b.

Each property proposed for acquisition would normally be scored separately. However, if several related properties were proposed for purchase as a group to optimize use of funds, the group could be assigned a composite score (e.g. the criteria could be applied and a score assigned to the Forest Service Lake Tahoe project or the Park Service Santa Monica Mountains project as a whole).

III. DOI and USDA tentatively rank acquisition proposals.

The Departments would jointly prepare a unified list of acquisition proposals, ranked in descending order of points scored. A cut-off point would be determined by summing costs associated with the ranked acquisitions until the cumulative cost reached the land acquisition budget limit ($206 million less administrative and emergency acquisition costs).

IV. Review by Land Acquisition Working Group.

A Land Acquisition Working Group would be established, comprising representatives of the Assistant Secretary of the Interior for Fish, Wildlife and Parks; the Assistant Secretary of the Interior for Land and Minerals Management; and the Assistant to the Secretary of Agriculture for Natural Resources and Environment.

The Working Group would review and modify the tentative ranking of land acquisition proposals to reflect (1) corrections of identified scoring errors, (2) proposed exceptions to the minimum criteria, and (3) subjective factors not taken into account in the scoring process.

Examples of subjective factors include, but are not limited to: the role of a given acquisition in a coordinated Federal/State/local effort to preserve recreation lands; the possible effect of an acquisition on State, local, or private efforts to offer competing recreation opportunities; the prospect that a private conservation group may desire to purchase the property.

For each proposed acquisition added to the list on a basis other than points scored, the Working Group would prepare a written justification explaining why the acquisition has been afforded higher priority.

Attachment A

Recreation Activities

Hiking
Camping
Picnicking
Hunting
Swimming
Boating/Canoeing/Rafting
Auto Touring
Off-road Vehicle Use
Skiing/Ice Skating
Snowmobiling
Bicycling
Horseback Riding
Observing Wildlife

140. Question: It is hard to believe that an agency would agree completely with OMB. What are your priorities? What criteria did you use to select the land acquisition projects?

Answer: The BLM used the uniform criteria which provide agency discretion in prioritizing those projects most important to agency goals. The Departments of the Interior and Agriculture to selected the projects to be funded by using the ranking criteria. The BLM's land acquisition priorities for FY 1991 emphasized completion of acquisition work in Congressionally designated areas, such as Wild and Scenic Rivers and National Conservation Areas. The priorities also supported the "America the Beautiful" initiative and the BLM's Recreation 2000, Fish and Wildlife ~~2000 and~~ the Riparian/Wetlands programs to enhance recreation and protect critical resources.

141. Question: Would you provide for the record a listing of all projects requested in FY 1991 that have a balance of funds appropriated in prior years? Would you also include with this submission an indication of the total unobligated balance for each

project, the status of efforts to obligate those funds (including an indication whether all necessary appraisals have been completed and whether there are willing sellers in each case), and the reason why additional funds are required in FY 1991?

Answer:

Project	Unobligated Balance (3/31/90)	Appraisal Status	Willing Seller	Obligation Efforts
Big Hole River (MT,	$150,000	Done	Yes	Negotiations in progress
Upper Missouri W&SR (MT)	$466,000	Done ($450,000)	Yes	Negotiations in progress
New River (OR)	$497,000	In progress ($400,000)	Yes	Negotiations will begin after appraisal is completed.
Steen Mtns. (OR)	$115,000	Appraisal Completed	Yes	FY 91 funding needed to continue
Owyhee R. (OR/ID)	$415,000	2 Appraisals in progress ($400,000)	Yes	Negotiations in progress
Blackwell Is. (ID)	$18,000	Temporarily not marketable	Yes	None at present
Carrizo Plains (CA)	$4,274,000	Appraisal done ($4,662,000)	Yes	FY 91 funding need to complete
Chuckwalla Bench (CA)	$523,000	59 Appraisals Req. ($400,000)	Yes	Negotiations on-going
Desert Tortoise NA (CA)	$1,196,000	In progress ($350,000)	Yes	Negotiations on-going
King Range (CA)	$598,000	In progress ($160,00)	Yes	FY91 funding needed to comp.
Bizz Johnson Trail (CA)	$43,000	In progress ($40,000)	Yes	Funding need to complete

These 11 projects require multi-year funding to complete acquisitions as prescribes by land-use planning decisions, and with the exception of Blackwell Island, are progressing on schedule. The high unobligated balance on some projects is due to the restoration of fire transfer funds which did not occur until October, 1989. Based on available appraisal information we anticipate that most of the unobligated balances will be depleted in 1990. Additional funds are needed in FY 1991 to maintain our acquisition schedule and complete these long-term projects.

142. Question: Would you provide for the record a listing for all BLM projects through priority order No. 71 which have imminent development threats? Were any of these threats unknown at the time your FY 1991 budget was put together?

Answer: The FY 1991 project list following question 143 indicates which projects have threats from imminent development potential.

143. Question: Please identify for the record any project through priority No. 71 which is planned to be purchased in concert with any other State, federal, or private agency or for which there is nonfederal cost-sharing?

Answer: The following FY 1991 project listing provides the requested information.

FY 1991 LAND ACQUISITION PROJECT LIST

Number	Bureau	Project	Acres	Amount	Project With Imminent Development Potential	Project with Other Entity Cost Sharing
	BLM	Acquisition management	0	1,100,000		
	BLM	Emerg./Hardship/Inholding	0	1,500,000		
1	BLM	N.Fork American River, CA	120	100,000	X	X
2	BLM	Upper Sacramento River, CA	1,700	800,000	X	X
3	BLM	San Pedro NCA AZ	1,020	770,000	X	
4	BLM	New River ACEC, OR	1,000	1,500,000	X	X
5	BLM	S. Fork Snake Rv. ID	1,300	1,300,000	X	X
6	BLM	Snake R. Birds of Prey, ID	359	153,000	X	
7	BLM	S. Fork Merced River, CA	160	250,000		X
8	BLM	Lower Salmon Rv. ID	1,200	1,000,000	X	X
9	BLM	Eagle Lake, CA	138	400,000	X	
10	BLM	Bonita Creek ACEC, AZ	2,180	330,000	X	
11	BLM	Steens Mtns, OR	10,890	1,350,000		
12	BLM	Big Wood River, ID	500	200,000		
13	BLM	Owyhee River, OR/ID	1,500	1,320,000		X
14	BLM	Bizz Johnson Tr. CA	150	300,000		X
15	BLM	Santa Rosa Mtns, CA	1,500	1,500,000	X	X
16	BLM	King Range, CA	240	500,000		X
17	BLM	Blackwell Island, ID	28	250,000	X	X
18	BLM	Carrizo Plains, CA	30,000	4,500,000	X	X
19	BLM	Des.Tortoise Nat'l Area,CA	1,500	200,000	X	X
20	BLM	White Mtn. NRA ACQ., AK	184	410,000	X	
21	BLM	Cache Cr. CA	1,200	1,500,000		
22	BLM	Canon Tapia, NM	400	160,000	X	
23	BLM	Big Hole Rv. MT	439	180,000		X
24	BLM	Blue Water Canyon, NM	196	175,000		
25	BLM	E. Mojave N. Scenic A, CA	800	300,000		X
26	BLM	Upper Missouri River, MT	14,210	300,000		X
27	BLM	Delores River Access, CO	400	100,000		
28	BLM	Phoenix Wilderness ACQ,AZ	3,280	580,000		
29	BLM	Ruby Canyon, CO	1,137	350,000		
30	BLM	Chuckwalla Bench, CA	1,000	700,000	X	X
31	BLM	Indian CR N. Tr., NV	500	200,000	X	X
32	BLM	CO Rv./Black Rdg. Cany.CO	1,200	300,000		
33	BLM	Gunnison River Access, CO	812	125,000		X
34	BLM	Fig Springs, AZ	640	210,000	X	
35	BLM	Riverwood Ranch, ID	1,920	120,000		X
36	BLM	McCain Valley, CA	320	250,000		X
37	BLM	Boise Front Rec Area, ID	520	150,000		
38	BLM	Rio Chama, NM	1,020	350,000		X
39	BLM	Trout Mtns, OR	3,120	430,000		X
40	BLM	Yakima Canyon, OR	5,000	500,000		X
41	BLM	Great X Cave, WY	80	40,000		
42	BLM	Heaton/Mt. Logan, AZ	5,840	770,000		
43	BLM	Ryan Ranch SRMA, CO	869	1,100,000		
44	BLM	Schmidt Tract, MT	34	162,000		
45	BLM	Rush Lake, UT	1,005	230,000		
46	BLM	El Malpais, NM	22,000	1,250,000		X
47	BLM	Ferris Mtns, WY	1,800	350,000		X
48	BLM	CD'A Wildlife Esmts, ID	132	1,500,000		X
49	BLM	Donovan Ranch, MT	2,123	478,000		
50	BLM	Parkdale Ark RiverAccess CO	30	100,000		X
51	BLM	Fremont R. Narrows, UT	160	60,000		
52	BLM	Mahoney Lake, WY	2,400	135,000		
53	BLM	Encampment River, WY	645	41,000		
54	BLM	Chimney CR. Nat'l Trail WY	320	75,000		
55	BLM	Santa Clara R., UT	40	140,000		X
56	BLM	Emigrant Spring, WY	40	10,000		X
57	BLM	Organ Mtns, NM	2,100	2,220,000		
58	BLM	Red Cloud/Handies Peak, CO	217	140,000	X	
59	BLM	Ruby Res Rec Area, MT	8	10,000		
60	BLM	Oregon Nat'l Tr. ID	1,600	405,000		X
61	BLM	Upper Colo St. Bridge, CO	34	250,000	X	
62	BLM	Little Bookcliff Wild Horse	560	115,000		
63	BLM	Powderhorn Access, CO	40	100,000		
64	BLM	Garnet Ghost Town, MT	37	50,000		X
65	BLM	Chacoan Outliers, NM	5,731	644,000		X
66	BLM	Bessimer Bend, WY	10	50,000		X
67	BLM	Fort Laclede, WY	8	20,000		
68	BLM	Spring Gulch, ID	4	15,000		
69	BLM	Yuba Res Rec Area, UT	1,362	275,000		
70	BLM	Desert Tortoise Crit Hab, Ut	320	120,000		X
71	BLM	Amundsen Cabin, AK	10	50,000		

Oregon and California Grant Lands

Spotted Owls

144. Question: The Committee recommends abandoning the current spotted owl habitat areas in favor of protecting larger blocks of habitat called habitat conservation areas (HCAs). How many acres are to be set aside under the new HCA scenario? How many acres are set aside under the present management guidelines? What is the total acreage of O&C lands managed by the BLM?

Answer: BLM managed lands in western Oregon total approximately 2,386,500 acres, of which 2,091,600 acres are commercial forest lands. Under the current plans (1980's decadal timber management plans), 1,671,700 acres (80% of the commercial forest land base) is available for timber harvest and 419,900 acres of commercial forest land are withdrawn from timber harvest. These areas are withdrawn from the commercial forest land base for reasons such as fragile sites, regeneration problems, and reservations for riparian zones, old growth forest retention, and protection of recreation and other values. The proposed HCA's would require setting aside an additional 611,200 acres, for a total of 1,031,100 acres withdrawn.

The Interagency Committee dedicated itself solely to studying the science of the northern spotted owl. Its deliberations did not encompass the economic and social impacts to the region of a recommendation that would drastically alter the timber program level.

145. Question: What is the estimated job loss and economic impacts associated with the implementation of the Committee's recommendations?

Answer: Based on the report prepared jointly by the Forest Service and the BLM in May 1990 titled "Economic Effects of Implementing a Conservation Strategy for the Northern Spotted Owl. The estimated employment loss as a result of implementation by BLM would be 7,669 jobs. An estimated $69.8 million (in 1989 dollars) in revenue to the counties would be lost from the reduced BLM timber receipts, based on full implementation of the Interagency Scientific Committee (ISC) report. Annual sale quantity (ASQ) would be reduced to 443 Million Board Foot (MMBF) (1,176 MMBF - 733 MMBF).

146. Question: How will the Conservation Strategy recommendations affect the BLM organization?

Answer: We do not plan any changes in the BLM organization at this time. We concur with the directions contained in the 1990 Interior Appropriations Conference Committee Report that management plan for the spotted owl should be developed by analysis of alternatives under the 1990 decacal planning efforts scheduled for implementation in October, 1992 (FY 1993).

147. Question: Section 318 requires BLM to offer an aggregate of 1.9 billion board feet of timber in FY 1989 and FY 1990. How much timber have your offered to date?

Answer: As of May 1, 1990, we have offered a total of 1,266.2 MMBF of the aggregate 1,900 MMBF of timber required under Section 318.

148. Question: How much timber have you offered to date for FY 1990?

Answer: As of May 1, 1990, we have offered 521.2 MMBF in FY 1990.

149. Question: Where are you in meeting the mandated volume as specified in Section 318 of P.L. 101-121, the FY 1990 Appropriations Act for the Department of Interior and Related Agencies?

Answer: As of May 1, 1990, we are 633.8 MMBF short of meeting the mandated sale offering volume of 1,900 MMBF by September 30, 1990. Absent the listing of the owl, we expect to meet the legislative mandate.

150. Question: How much volume do you expect to have offered before the anticipated June 23 decision?

Answer: We plan to offer approximately 84 MMBF in May sales. All June sales are planned after June 23, 1990. Therefore, we plan to have offered 1,350 MMBF of volume before June 23, 1990.

The FY 1990 Appropriations Act provided for the return of 50% of the O&C and the Coos Bay Wagon Road receipts in excess of the amount estimated for FY 1989 in the FY 1990 budget request. The excess receipt funding was to be used for reforestation and forest development and timber management. The excess receipts amount that was made available to BLM was $30.1 million.

151. Question: Please describe briefly how are you using the excess receipts funding.

Answer: In FY 1990 we will use $13,602,000 for reforestation and forest development activities and $8,485,000 for timber management. Timber management funds will be used to offer 440 MMBF of volume for sale in FY 1990. Some of these funds were originally planned to be used to increase lead time on FY 1991 timber sale planning, but we have had to use some to make shifts of FY 1990 sales to preserve further future options for owl protection.

152. Question: How much of the excess receipts is being used to prepare timber to be sold in FY 1991? How much volume?

Answer: We estimate that the preparation of approximately 25% of the planned 1991 sale volume will be accomplished in 1990 with excess receipt funding. Data are not available to determine the amount of excess receipt funding that will specifically be used for 1991 sale preparation.

The historical level of sold, but unharvested volume has been about 2,400 MMBF annually (or about 2 years worth of normal sale offerings). The estimated volume that is expected to be sold but unharvested is declining. In FY 1989, it was 1,210 MMBF; in FY 1990, it is estimated at 1,165 MMBF; and in FY 1991, you are estimating that the volume will be 1,065 MMBF.

153. Question: This seems to suggest that the timber industry in Oregon is able use some of its reserves to lessen the impact of the decrease in timber being offered. Is this correct?

Answer: Yes, however, lessening of the impact will only be minimal and temporary. A substantial portion of this volume is not immediately available due to the need to complete road construction or because of environmental constraints on harvest season. Furthermore, this volume is not equally distributed among purchasers.

154. Question: If so, how long can this temporary fix continue?

Answer: Over the past year, the volume under contract has been depleted at the rate of approximately 200 MMBF per each 6-month period. This has resulted primarily from reduced levels of sale offering and award in FY 1989 and the first half of FY 1990. Harvest progress has not accelerated and approximates the levels predicted. There is a great deal of uncertainty regarding the final sale offering levels for FY 1990 and FY 1991 resulting from possible adoption the Thomas Report recommendations, possible listing of the spotted owl, and possible appeals and/or litigation of timber sales. Assuming offering and award of 1,155 MMBF in FY 1990 and 950 MMBF in FY 1991 and the current rate of harvest, the FY 1991 end-of-year harvest figure will be approximately 1,065 MMBF.

Reforestation and Forest Development

Your budget justification (on page 407) states that the impact of the restriction on the use of herbicides since the injunction in 1984 is also affecting the current programs.

155. Question: Please explain how the restriction affects your current program.

Answer: The 1984 herbicide injunction has resulted in the use of more costly alternatives such as the use of paper mulch and hand clearing around individual planted tree seedlings instead of aerially-applied herbicides. The cost differential is roughly 7-to-1. Another example is hand cutting of brush species at $100 - $150 per acre compared to aerial application of herbicides at about $50 per acre. These higher costs of treatments have resulted in a large number of plantations that are overtopped by brush and an increasing number of plantation failures especially in our Medford district, where plant competition for available moisture is critical to seedling survival.

156. Question: Please update us on what the current situation is regarding legal challenges.

Answer: Judge Burns lifted the injunction against the use of herbicides for the Forest Service in May 1989. The basis for the lifting was a mediation document signed by both the Forest Service and key anti-herbicide groups. The document required the Forest Service to have an implementation plan developed by November 1989. This has not occurred. The Forest Service (Region 6) is currently working with anti-herbicide groups to develop such a plan, but key elements are still missing and each step is reached with difficulty.

157. Question: What is the likelihood of using herbicides in FY 1991?

Answer: We expect to issue our final Vegetation Management Programmatic EIS Record of Decision and ask Judge Burns to lift the injunction on BLM in July, 1990. The availability of herbicides by 1991 remains uncertain in light of possible continued legal challenges. If herbicide use were to become available in 1991, the capability of the BLM to accomplish any significant amount of additional acreage would be very limited, because of the need to rebuild the logistical aspects of the program.

In FY 1989, a new analysis, which reassessed and updated treatment needs for western Oregon was completed. Even with the ability to use excess receipts in FY 1990, it appears that BLM is anticipating that the treatment backlog acres for reforestation, pre-commercial thinning, and fertilization will continue to increase.

158. Question: How much of the excess receipt dollars do you plan to use for treatment needs in FY 1990?

Answer: We plan to use $13,602,000 of excess receipt funds for reforestation and forest development work in FY 1990.

159. Question: Why are you anticipating that your reforestation, pre-commercial thinning, and fertilization needs will continue to mount?

Answer: Our currently approved 10-year timber management plans identified the need to treat 12,000 acres of pre-commercial thinning and 22,000 acres of fertilization on an annual basis in order to support the sustained yield harvest program. The backlog we have identified in these practices is in addition to the level of annual need which has not been fully addressed in years past as emphasis was directed to completing salvage sales, accounting for "buy-back" credits and other work that had been outside of the sustained yield allowable cut effect calculation in these plans. We do not however, anticipate that our reforestation needs will continue to mount.

160. Question: Why are the backlog acres for site preparation decreasing and the reforestation backlog acres increasing?

Answer: The "bulge" in harvest activity peaked in 1988. This "bulge" then progressively works its way through the base level of various site treatments. Site preparation activities precede reforestation and the acreage needing treatment would expect to decrease before reforestation acres. In many cases site preparation is a prerequisite to successful reforestation.

Cultural Resources

Mr. Jamison, it is my understanding that BLM manages the Federal governments largest, most varied, and scientifically most important body of cultural resources.

161. Question: What is the greatest threat to these treasures?

Answer: The greatest threat to our Nation's cultural legacy is posed by commerical and private collectors, who destroy and plunder our cultural resources. These groups and individuals are looting and vandalizing sites for the purpose of obtaining commercially valuable artifacts which can be sold through the underground marketing network, or which can be added to private collections. Generally, only those classes of sites containing the valuable or unique artifacts are disturbed, e.g., rock shelters, masonry pueblos, habitation sites, although we are seeing an increasing level of vandalism on other types of cultural resources, such as rock art sites.

162. Question: What measures are you taking to protect these resources?

Answer: BLM is implementing a multi-faceted approach to deal with the problem of looting and vandalism. Approximately one-third of BLM's cultural resource management subactivity funding is devoted to resource protection and site management. This funding focuses on aggressive public education and awarenesss, including interpretation of significant cultural resources, resource stabilization and protection, and partnerships with numerous public and private organizations. Highlights of on-going activities include a strongly increased field presence by BLM Rangers to deter looting, and establishment of cooperative, volunteer "adopt-a-site" programs. Increased field presence also focuses on documenting site condition changes to assist in prosecution of offenders. In addition, higher priority has been placed on archaeological resource violation investigation within the resource protection and law enforcement subactivity.

163. Question: Is this level of protection adequate?

Answer: The BLM recognizes that the long-term solution to stemming archaeological resource looting and vandalism on the Public Land is through an aggressive public education and outreach program. Such a program emphasizes explaining to the public in an understandable way the importance of archaeological resources and the need for protecting them. Law enforcement support is also necessary to combat the hard-core commercial looter. However, because of the wide expanse of the Public Land, even a vastly expanded law enforcement presence could not curb all looting.

I have learned that BLM archaeologists have discovered and inventoried 45 miles of the historic Spanish Trail/Morman Road. The segment I am referring to runs from Las Vegas to the California border.

164. Question: Has the stretch which runs from Las Vegas east to Utah been inventoried?

Answer: The stretch of the historic Spanish Trail/Mormon Road from Las Vegas east to the Utah border, spanning approximately 65 miles in length, has not yet been inventoried.

165. Question: Why?

Answer: The inventory would require mapping, and archival research as well as on-the-ground fieldwork to determine the path of the historic trail. This work is not as high a priority as some other resource protection efforts currently being funded.

166. Question: What are your ultimate plans for this historic trail?

Answer: Ultimately, the BLM is considering establishing an interpretive and recreational site at the most intact portions of the historic Spanish Trail/Mormon Road. This would involve preparing and implementing a management and interpretive plan for the historic trail, placing signs and kiosks along the trail, developing interpretive materials, and developing a travelling museum display to interpret and explain the significance of the trail.

167. Question: At present funding levels how long will it take your agency to fully implement your proposal?

Answer: At continuation of present funding levels, the above identified measures could be implemented by FY 1993.

168. Question: How much additional funding would be required to achieve full implementation by FY 1992?

Answer: To fully implement and complete the measures outlined above by 1992 will require approximately an additional $120,000 for inventory, mapping, and archival research interpretive signs, facilities, and materials, and to design and develop a museum display.

Red Rock Canyon Recreation Area

I am concerned that while visitor use in the Red Rock Canyon Recreation Area has grown almost exponentially, fiscal capability has continued to lag further and further behind. For example, visitation at the Red Rocks Visitor Center over the last 7 years has increased 238%, while the budget during the same period has increased only 46% with no adjustment for inflation. I am deeply committed to providing the American people a quality recreation experience without allowing the natural values at Red Rock Canyon to decline.

Based on the preceding data pertaining to rapidly increasing visitor use demands and a sadly lagging budget, it appears to me that the funding level in the current budget request fails to provide acceptable resource protection and visitor interpretation at what I consider to be BLM's premiere recreational resource.

168b. Question: Do you believe a funding increase in the recreation management program of $300,000 for 12 full time equivalents and $170,000 for operating costs, above the budget which is before me, to ensure the reasonable protection, enhancement, and interpretation of the Red Rock Canyon Recreation Area could be used efficiently?

Answer: The FY 1991 funding level in the President's Budget is adequate for present management needs of the Red Rock Canyon Special Recreation Management Area, considering other BLM recreation funding priorities. The Nevada State Office would receive an increase in recreation resources management funds for high priority areas in the State, such as Red Rock Canyon. Emphasis for additional funding at Red Rocks would be on the revision of the Master Plan and preparation of an activity plan to address newly acquired lands. The 1991 President's Budget proposal also includes an increase of $280,000 in facilities maintenance to be used specifically for improvement of the Red Rock Loop Road, repairs to the Willow Spring Campground, and maintenance of 15 miles of hiking trail.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Bureau of Land Management

Timber Receipts

1. Question: The FY 90 budget estimated that timber receipts for FY 89 would total $185 million. The FY 91 budget indicates that the actual amount of timber receipts is $253 million. A similar increase can be found comparing the FY 89 estimate to the actual (pg. 11). What is causing the discrepancy? Is it the bid prices or the amount of volume of timber harvested?

Answer: The difference between the estimated receipts and the actual collections results from the effects of both an accelerated level of harvest activity on previously sold contracts and increased average sale prices bid on timber in western Oregon. The market has been very volatile for the past several years due to the uncertainty of the future timber supply.

2. Question: In the FY 90 Interior Appropriations Act, language was included directing that 50 percent of the amount of receipts

above the original estimate should be provided to the Oregon and California grant lands account. My calculations indicate that 50 percent of this "excess" totals approximately $34 million. What amount was returned to the O&C account? What is the current backlog of reforestation and intensive management?

Answer: The 1990 Appropriation Act (P.L. 101-121) provided for the return to the BLM "O&C Grant Lands" account of 50 percent of the O&C and CBWR receipts in excess of the amount estimated for 1989 in the 1990 President's Budget. This provision provided $30,092,561 of additional funding to the BLM's 1990 O&C Grand Lands Appropriation.

The current anticipated level of "backlog" that will carryover into 1991 is listed on page 409 of the BLM Budget Justifications. Considering the availability of some of the "excess reciept" funding in 1991 as authorized in 1990, the carryover anticipated at the end of 1991 is as follows:

ANALYSIS OF TREATMENT NEEDS

	Site prep. (acres)	Reforest. (acres)	Plant. Maint. (acres)	Pre-Comm. Thinning (acres)	Fertil. (acres)
Expected Treatment Needs at 1991 EOY	44,500	19,300	99,900	50,000	129,400
Acceptable Level of Annual Carryover	-7,000	-10,000	-24,400	- 2,500	-12,900
Acres of Available Treatment Opportunity	37,500	9,300	75,500	47,500	116,500

3. Question: I note that the FY 91 budget indicates that the estimate of timber receipts has risen to $272 million for FY 90 and $314 million for FY 91. While this is not a big increase from the FY 89 actual, it is a big increase from the FY 89 estimate. Now that we are halfway through the fiscal year, will actuals beat the estimate?

Answer: The 1990 collections (through March) are running 4.3% over the amount collected during the same period in 1989 but are 2% behind the rate of collections from last year. At this time, it appears that the estimate will be relatively accurate, possibly a little high.

1989 - 1990 COMPARITIVE ANALYSIS

($000)	1989	1990
1989 Actual Collections	234,985	---
1990 Pres. Budget Estimate	---	254,600
1st 6 Months of Collections (% of Total)	105,794 (45%)	110,265 (43%)

Filing Fees

Language was included in the FY 89 Interior Appropriations bill which permanently established that all receipts from processing activities associated with the General Mining Laws shall be available to the BLM for program operations (pg. 12). Accordingly, the BLM has made a downward adjustment of approximately $1.5 million in the amount of Registration and Miscellaneous Filing Fees anticipated to be collected in FY 90.

4. Question: Will $1.5 million be adequate to run the program? If not, how will you obtain additional funds?

Answer: Yes. The 1991 Budget proposes the establishment of an annual holding fee of $100, which would replace the $5 per claim annual filing fee. Estimated receipts will total $97.5 million in FY 1991. Of that amount, $12 million will be used to fund the operation of the current Mining Law Administration Program (exclusive of mining claim recordation) including surface management. Up to $7.5 million would be available to BLM to offset the costs of administering the holding fee program, which is a part of the mining claim recordation process. An additional $1.5 million is estimated to be available from the collection of fees charged for filing new and amended claims. Therefore, a total of $21 million would be available to fund the mining law program.

5. Question: If historical data indicates that $1.7 million is collected annually, why was $2.6 million collected in FY 88 and FY 89?

Answer: This account also includes the collection of filing fees for prospecting permits, leases, licenses, extension of permits, renewals, modifications, and requests for approval of transfer of leases or permits or interest in such, etc. Collections in this account vary for reasons outside of our control which thereby makes it difficult to predict on any given year with any degree of reliability. Collections for the past five years have varied from $1.5 million in 1985 to $2.6 million in 1988 with the average being about $2.0 million. We cannot provide specific reasons as to why the collections were higher for those two referenced years.

Oil and Gas

6. Question: As a result of the recent increases in oil and gas prices, the BLM has 2,000 (+11%) more oil and gas leases in a producing status than there were a year ago (pg. 36).

Generally, where are these additional leases located? Do you anticipate this number will continue to increase over the next 12 to 24 months?

Answer: Because of BLM's efforts in improving the quality of the Automated Inspection Record System's database over the past 18 months, a more accurate count of producing leases is available. No actual increase in the number of producing leases has actually occurred.

Well Shut-In

As a result of the decline in oil prices during 1986, the BLM took several steps with regard to shut-in stripper and marginal wells. Instructions were issued to allow lease suspensions for a period not to exceed one year on leases with shut-in wells without the operator losing the lease. The policy is designed to prevent the premature abandonment of oil and gas resources due to price fluctuations.

The budget indicates that this policy has been extended through May, 1990 (pg. 38).

7. Question: How successful has this effort been?

Answer: During the next 6 months, we plan to hold a series of public meetings to determine the future of the policy. This will include a discussion of proper bonding amounts and/or tests required to ensure that the affected shut-in wells are not left in a condition to pose an environmental risk nor place the government at risk for potential liability for unplugged wells in case of loss of economic viability of the operator.

8. Question: How much of the success of this initiative can be attributed to the increase in wells in a producing status?

Answer: We do not attribute any of the success to the number of wells in a producing status.

Oil Spill Study

9. Question: A national environmental organization recently released an analysis which estimated that there have been 10,000 oil spills which have occurred since the Exxon Valdez ran aground over a year ago. Most of these spills, however, were not near any National Parks and I don't believe they were near any Federal land or water. Have you analyzed this report? If so, how many of these spills were related to oil production on BLM lands?

Answer: No, we have not yet analyzed the report. On federally supervised onshore oil and gas lands, EPA-approved Spill Prevention Control and Countermeasure Plans are required to be furnished to BLM by the operation.

10. Question: One of the three central points made by the group is that there must be stronger incentives for the oil and shipping industries to extract, transport, and refine oil more safely. Do they have a point? If so, what are we doing about increasing these incentives?

Answer: The BLM does not have any jurisdiction over shipping industries. However, we constantly review our environmental rules concerning production and are currently working on several oil and gas operating orders that will strengthen environmental protection in both drilling activities and ongoing operations, for which we have regulatory authority.

A recent MMS task force report warned that Federal enforcement of safety and production regulations may become strained as a result of the increased emphasis placed on oil and gas production in the Gulf of Mexico.

11. Question: The report indicated that the MMS is meeting its goal of inspecting drilling rigs in the Gulf every month. Unfortunately, the inspection period for production platforms is approaching 13 months with a 12 month goal. The budget (pg. 38) indicates that the BLM anticipates at least "one on-site inspection will be scheduled for each priority producing lease. The remaining producing leases will be inspected at least once every three years."

Have you analyzed the BLM's safety and production regulations recently? Are you having similar inspection problems with BLM's oil and gas program as a result of the increase in activity?

Answer: During the past 12 months, we have conducted a comprehensive review of our Inspection and Enforcement Program. We believe that substantial and adequate regulations and requirements exist to ensure safe operations and production accountability.

We have determined that we are meeting the legislative mandate to inspect annually all high production leases and those with a history of operator non-compliance. However, if industry activity increases, we will reassess our capability to continue to adequately ensure production accountability, public health and safety, and environmental protection. An upturn in industry operations will place a greater workload on this program.

12. Question: I know that there is a big difference between onshore and offshore oil and gas drilling. Are annual inspections adequate for onshore wells when the offshore inspections are monthly?

Answer: Unlike offshore operations, where drilling rigs are in place for years, onshore drilling usually lasts no more than 3 months per well, and often for shorter durations, depending on the depth of the well. After they are drilled, it is our understanding that many of the offshore leases are also inspected annually, but that in addition, MMS performs a 10% spotcheck on production facilities and a 50% spotcheck on drilling operations.

Mining Fee

You have proposed the establishment of a holding fee of $100 for each mining claim. This would replace the current BLM filing fee of $5 per claim for annual assessment as well as the current requirement to perform $100 worth of annual assessment work. It is anticipated that this shift will raise $97.5 million in revenue. Of these funds, $21 million will be used to offset the costs of the mining law program (pg. 52).

The justification indicates that one of the motivating factors of this proposal is "to reduce the number of claimants who have no serious intention to mine, or hold their claims solely for speculative purposes."

13. Question: How did you determine that 975,000 of the 1.2 million claimants would be willing to pay the fee?

Answer: This determination is an estimate. We anticipate that about 220,000 claims could be abandoned by claimants when the annual holding fee is required. We feel strongly that claimants who are sincerely interested in the exploration or development of federal mineral resources will continue their efforts with or without a holding fee and with or without the need for assessment work, because the long-term benefits of developing a paying mine will be substantially unchanged.

14. Question: Is the holding fee required if assessment work is done? What do you expect will happen to the abandoned claims?

Answer: If the holding fee proposal is implemented, the failure to pay the fee constitutes the presumption of abandonment by operation of law. For the phase-in period, for the assessment year beginning on September 1, 1990, and ending with the date of the passage of the appropriations act, any claimant who has performed the annual labor will receive a waiver on the payment of the fee upon demonstrating that performance to the BLM.

In the case of those claims which are abandoned for failure to pay the annual holding fee, the lands will be open to location by another party. The effect will be to free up Federal lands for exploration and development by those individuals and companies who plan to bring the mineral deposits into the marketplace as opposed to those who hold the claims for speculative or non-mining purposes.

The budget also argues that this proposal will "provide both environmental and mineral production benefits. It will eliminate activities that result in surface disturbance of lands solely to maintain a claim."

15. Question: What do you mean when you state that this proposal will provide both environmental and mineral production benefits?

Answer: The nation as a whole will benefit from an environmental standpoint by a reduction of surface disturbance resulting strictly from the assessment work requirement as well as from the freeing up of lands for additional exploration and development by those claims staked strictly for speculation. The proposed fee will enable a claimant to maintain the claim but will not preclude or limit this ability to explore and develop the mineral deposit located within the claim.

Most large mining companies typically spend more than $100 annually per claim on assessment work. Many small miners, however, do not have $100 to squander on a holding fee. Small miners do have the tools, the time, and the desire to work a claim in the hope of developing their discovery. One of the basic tenets of the Mining Law is to develop minerals in order to enhance the economy and national security of this country. This proposal eliminates much of the incentive of the prospectors to turn a discovery into a successful mine.

16. Question: Why does the BLM want to be tax collectors?

Answer: The holding fee proposed is not a tax. It is a user fee, paid by beneficiaries to maintain a privilege granted by the Federal Government. The proposal is consistent with the Administration's policy on user fees. We believe that the fee proposal provides no disincentive to the serious operator which would inhibit the ability to explore and develop any mineral deposit, and also provides environmental benefits. Although some claims would be relinquished by the speculative claim locator, these lands would then become available to exploration and mining by others.

Land Exchanges

17. Question: You have requested an additional $950,000 to process land exchanges in support of your multiple-use programs (pg. 74). The justification indicates that the increase is necessary to complete priority land exchanges that directly support the initiatives identified in Recreation 2000 and Fish and Wildlife 2000. Can you elaborate on what is proposed in those two initiatives and how this increase addresses those needs?

Answer: Both of these initiatives have objectives that recognize the need for the consolidation of scattered Public Land tracts where such a land pattern limits or precludes efficient management, protection at critical resources and public use of the area. Specifically, Recreation 2000 calls for the consolidation of land ownership to provide high value recreation opportunities and ensure physical and legal access to the Public Land. Fish and Wildlife 2000 identifies the need to acquire lands to improve the quality and quantity of wildlife habitat through acquiring areas essential to achieve management objectives. The increase will allow the BLM to negotiate and execute land exchanges which support these objectives in accordance with State implementation plan priorities and land use planning decisions.

18. Question: Does this increase fully fund those proposals?

Answer: The requested increase allows BLM to make a substantial increased effort toward accomplishment of land exchanges identified in completed land use plans which support the objectives of Recreation 2000 and Fish and Wildlife 2000. At the President's Budget request level, approximately 72,000 acres of additional land exchanges would be accomplished in priority areas. As land use plans are completed, additional opportunities for consolidating land ownership patterns will be identified.

19. Question: What are the future land exchange funding requirements recommended in those initiatives?

Answer: The Recreation 2000 and Fish and Wildlife 2000 initiatives do not identify specific funding requirements for future land exchanges. BLM field offices will continue to identify land exchange needs based on land use planning decisions.

20. Question: The Federal Land Exchange Facilitation Act (FLEFA) of 1988 permits the streamlining of land exchange procedures, and assures that there are uniform regulations pertaining to land appraisals and value resolution in the land exchange process (pg. 74). The implementation of FLEFA is anticipated to increase the demand, interest and diversity of exchanges in 1991. What is the status of the regulations of this Act? Have they been finalized?

Answer: The Forest Service and the BLM have each published proposed rules in the Federal Register on August 19, 1989. Both agencies received numerous comments which questioned the lack of consistency in the proposed rules. In response, the BLM and FS have developed a consistent rule which will be published again as a proposed rule for public review and comment. The comments will be received by October 1990 and a final rule is scheduled to be issued in February 1991.

21. Question: Is this Act the primary reason you anticipate state exchanges to increase from 77 to 270, or was there a base adjustment to the workload?

Answer: The increase in units reflects a shift in workloads from exchanges with private landowners in FY 1990 to State exchanges which will be ready for completion in FY 1991. The large difference in acreage also is a function of the size of State exchanges which tend to involve larger areas than exchanges with private landowners.

Wild Horses and Burros

The BLM initiated a sanctuary program to provide unadoptable wild horses to roam relatively undisturbed on select private land acres (pg. 95). The BLM currently has two sanctuaries which have the capacity to maintain approximately 4,000 animals. The sanctuary program is structured to provide Federal funding for up to three years. After three years, private fund raising efforts are expected to raise sufficient capital to sustain each sanctuary's operations.

22. Question: What is the status of the private fund raising efforts? Are they on schedule?

Answer: The South Dakota sanctuary reported a total of $67,222 raised as of March 31, 1990, the closing date of the last quarter.

The Oklahoma sanctuary, which began operation in September 1989, has not yet reported any funds raised. There is no established schedule for fundraising, other than the 3-year target for the sanctuaries to be financially self-sufficient.

23. Question: Your justification states that the BLM does not anticipate the establishment of any additional sanctuary until the success of the exisiting two sanctuaries has been demonstrated. What needs to happen at the existing sanctuaries before the BLM will move to the next sanctuary.

Answer: BLM policy concerning additional sanctuaries is not to establish another sanctuary until such time as the two in existence can be assessed. BLM was asked to prepare a report by OMB by June 30, 1990, on the progress and prospects for making the two sanctuaries self-sustaining.

The Director has asked the Montana and New Mexico State Directors to work with the sanctuary operators to develop draft reports in response to this request. The final report will be forwarded to OMB by the Director prior to the June 30 deadline. At that time, we will have a clearer picture of the status of the fundraising efforts.

Riparian

One of BLM's riparian management objectives is to achieve good or better ecological condition on 75 percent of the riparian areas by 1997. To meet this goal, BLM State Offices calculated a need of approximately $12 million per year for the next five years (pg.102). The FY91 request for riparian, however, is only $8.6 million.

24. Question: In what ecological condition will the riparian areas be by 1997 if level funding is provided?

Answer: There is no straight-line correlation between funding level and meeting the 1997 objective. In light of the objective to achieve good or better ecological condition on 75% of the riparian areas by 1997 it is difficult to predict what impact a $8.6 million annual program would mean. Presently it is known that 6% of the riparian areas managed by the Bureau (excluding Alaska) are meeting the management objectives, 9% are not, and for the remaining areas (85%) inventory is incomplete.

The National Wildlife Federation argues that 90 percent of riparian habitats are in unsatisfactory or unknown condition.

25. Question: Could you respond to that?

Answer: BLM's data indicate that 9% of our riparian areas are not meeting our planned management objectives (excluding Alaska). Six percent of the riparian areas are meeting our planned management objectives. It is unknown if the remaining areas (85%) are meeting the objectives. In most instances this categorization is based on the need for additional inventory/monitoring data, and does not reflect the condition of the riparian area.

Over the last 2 years there has been an increased emphasis on condition inventory and it is anticipated that the "unknown" category will be reduced significantly within the next 2-3 years.

Global Change

The BLM has requested an additional $2.1 million in FY 91 for a research initiative related to Global Change (pg. 111). Specifically, the BLM "proposes to acquire knowledge to improve its ability to predict and understand the effects of possible changing climatic regimes which impact the ecological relationships existing in the environments throughout the West and Alaska."

The budget indicates that this proposal contemplates a five year program of monitoring, and another 30 to 50 years of additional study.

26. Question: How will you proceed with this monitoring in FY91?

Answer: The BLM Global Change Research Program is part of the Department of Interior Global Change Research Program and will be conducted in accordance with U.S. Global Change Research Program (USGCRP) of the Committee on Earth Science (CES). The monitoring activities of this research program will be conducted in support of the regional ecosystem studies planned for the Western U.S. and Northern Alaska.

The project is designed to study and monitor key ecological communities over large spatial scales, including representative ecological systems already stressed by physical extremes and episodic events. Recognizing that the potential effects of global change will likely require several decades to manifest and distinguished from the impacts of local and regional human influences, the need for long-term monitoring, (30-50 years), will be important in the design of the initial 5-year study.

27. Question: Will this work be contracted out?

Answer: Yes, the research program anticipates using both new and ongoing cooperative agreements with universities in the western U.S. and Alaska, interagency agreements with many other Federal agencies, and possibly some contracting to private organizations.

28. Question: What are the funding requirements for the first five years?

Answer: Funding requirements for FY91-FY95 are anticipated to be at or near the 1991 President's Budget request level of $2.4 million. In the out-years, BLM will compete for available funding to conduct research and development in the area of Global Change mitigation and adaptation technology based on recommendations by the Committee on Earth Science through the Department's annual budget development process.

America the Beautiful

To carry out President Bush's program for preservation of the nation's resources, the FY 91 budget proposes a new initiative called America the Beautiful (ATB). In this initiative, the Administration has requested funding for a variety of programs in all four Federal land agencies.

The justification seems to indicate that part of the America the Beautiful program is contingent upon enactment of separate legislation. At one point the Administration was considering a separate authorization which included fees to raise these additional funds. Since that idea "quacked" in Director Darman's ears, it is my understanding that a simple budget amendment requesting additional funds above the budget before us today has been proposed by the Administration.

For all the agencies, the America the Beautiful program provides a total of $630 million. Of that amount, the Bureau of Land Management is requesting funds totaling $18 million in fiscal year 1991. Included in the total is an additional $6.9 million for Management of Land and Resources, and $11.7 million for Land Acquisition.

Some critics of the Administration are saying that this initiative is more smoke and mirrors than substance.

29. Question: Can you elaborate on the genesis of the America the Beautiful initiative?

Answer: A 16% increase for Federal land acquisition and an increase of 40% for selected resource protection and recreation enhancement programs does not, in our opinion, constitute "smoke and mirrors." The "America the Beautiful" Initiative was developed during the FY 1991 President's Budget foundation process by the Departments of Interior and Agriculture with the OMB to help carry out President Bush's pledge to undertake a program to strengthen and preserve the Nation's natural resources. Several mechanisms for obtaining funding for the America the Beautiful initiative were looked at during that process. At one point the concept of implementing a user fee approach was considered but in the end was not proposed. The "America the Beautiful" concept remains a sound initiative with the over riding objectives to enhance conservation, protect our irreplaceable natural assets and provide responsible stewardship of the nation's lands for the benefit of the generations to come. Some of the funds included within the "America the Beautiful" concept are from existing base program levels. However, for BLM, an increase above the base of $18 million is being requested, providing for additional work in the BLM's recreation management, wildlife hibitat management, land acquisition and construction program.

Recreation

An additional $3.9 million (+28 percent) is requested for the recreation program as a component of the America the Beautiful initiative. This increase is to be used to accelerate the implementation of the Recreation 2000 initiative. This initiative is a guide for the recreation management program for the next decade (pg. 141).

30. Question: What goals were established in Recreation 2000 and how will these additional funds address those goals?

Answer: The BLM's strategic plan "Recreation 2000" identified eight major challenges that are critical to the successful implementation of the BLM's long-range recreation policy objectives and form the basis for the BLM recreation initiative. These are: 1) visitor information and interpretation; 2) resource protection and monitoring; 3) land ownership and access adjustments; 4) partnerships; 5) volunteers; 6) tourism program; 7) facilities; and 8) permits, fees and concessions. The requested increase would be used to accelerate implementation of the Recreation 2000 goals and objectives according to priorities set forth in State implementation plans.

The proposed increase will provide BLM with additional capability to prevent damage to natural and cultural resources from improperly managed use; detect and stop increased illegal activities; provide management of recreation areas; ensure healthful and safe conditions in recreation areas; increase volunteerism and partnerships with State and local agencies and private and public groups; and expand public education efforts to engender appreciation of our resources. Funding will primarily be directed to identified high demand priority special recreation management areas in each State, which include Congressionally or adminstratively designated areas.

Blackwell Island

In FY90, $500,000 was provided to purchase the Blackwell Island in Coeur d'Alene, Idaho. These funds were to be matched from private sources to meet the necessary $1.0 million. The FY91 budget proposes another $250,000 for this acquisition.

31. Question: Why do you feel additional funds are necessary?

Answer: The BLM has previously requested that $480,000 of the $500,000 provided in FY 90 to purchase Blackwell Island be reprogrammed to another project. This request was necessary due to unforeseen difficulties facing the Blackwell Island landowners which caused the property to be removed from the market. We anticipate that the property will again be placed on the market in FY 1991. The additional $250,000 will enable the BLM to resume acquisition activities when the property again becomes available.

Snake River Birds of Prey

The National Guard and the Bureau of Land Mananagement are currently studying the impacts of the use of the Orchard training area by the National Guard. The Orchard Training Area is part of the Snake River Birds of Prey area which is managed by the BLM.

In FY 90 funds to study the use of the training area were provided through an add on to the BLM as well as funds to the National Guard as part of a five year study of the area. The study calls for an additional $861,000 from the BLM in FY 91.

32. Question: Is the $861,000 included in the President's request for these studies.

Answer: The 1991 President's budget includes research funding totalling $700,000 for studies located on the the Snake River Birds of Prey/Orchard Training Area.

33. Question: Is there $150,000 included in the FY91 budget for the Cascade Wildlife Restoration Program under the Wildlife Habitat Management Subactivity?

Answer: The 1991 President's budget includes funding which totals $150,000 for the Cascade Wildlife Restoration Program.

Boise Interagency Fire Center

In the last twelve months we have seen three major natural disasters in the United States. Hurricane Hugo, the earthquake in San Francisco and the Exxon Valdez oil spill.

34. Question: What interaction did the Boise Interagency Fire Center have with providing emergency assistance in the hours and days immediately following those disasters?

Answer: BIFC received orders for provision of emergency assistance in support of all three disasters. Requests were forwarded to BIFC through the established resource ordering process and channels.

BIFC supported the Valdez Oil Spill cleanup with 44 orders for radio equipment from April through May of 1989. These radios were utilized by cleanup personnel until early August, 1989. BIFC also processed orders for 62 overhead personnel on the oil spill cleanup from April to mid-June 1989. BIFC was opened the night of the California earthquake and a radio system was delivered to the earthquake area. Efforts in response to the Hurricane Hugo disaster were supported with 59 resource orders for radio equipment from mid-September through early November. This radio equipment was sent to the Francis Marion National Forest in South Carolina, to Puerto Rico and the Virgin Islands. In addition, 20 overhead personnel supported disaster relief efforts from mid September till December. Nearly 17,000 pounds of supplies were also delivered to aid cleanup efforts.

35. Question: What operational constraints did you encounter?

Answer: After all requesting units had been briefed on use of the established resource ordering channels and procedures, operational constraints were not encountered. BIFC continues to process Forest Service resource orders for equipment to support clean up efforts in the aftermath of Huricanne Hugo.

36. Question: What authoritative constraints did you encounter?

Answer: For a resource order received from another Federal agency by BIFC, the assumption is made that appropriate authorities/agreements exist with that agency for reimbursement. BIFC bills the ordering Federal agency for services rendered based upon the Master USDI/USDA Firefighting Agreement. If the President declares a Natural emergency and the Federal Emergency Management Agency - Federal Coordinating Officer requests support through appropriate channels, that provides authorization for BIFC to fill resource orders. Authoritative constraints appear only to be encountered at local levels. The area where authorization concerns exist is in the case of local events or emergencies that have not been declared a natural disaster by the President. In these cases, BIFC has no funding or authorization to provide assistance.

37. Question: Please provide the subcommittee with an assessment of the achievements of the Boise Interagency Fire Center during those operations.

Answer: BIFC filled all resource orders in a timely and effective manner. BIFC actions were consistent with the need for responsiveness during these disaster situations.

Spotted Owl

Approximately one month ago, the Interagency Spotted Owl scientific committee (the Jack Ward Thomas study) released its recovery plan for the northern spotted Owl.

38. Question: Has BLM completed a comprehensive study detailing the social, economic and timber volume impacts if this recovery plan is implemented? If so, what were your conclusions?

Answer: The BLM and the Forest Service jointly analyzed the effects on timber volume and related economics if the ISC recommendations were to be implemented. The effects are significant and are described in the full BLM/FS report entitled "Economic Effects of Implementing a Conservation Strategy for the Northern Spotted Owl" which was released on May 1, 1990. Copies of this report have been provided to the committee.

39. Question: Will the inherent nature of the O&C checkerboard complicate the BLM's ability to implement the scientific committee's recovery plan for the spotted owl? The Jack Ward Thomas recovery plan proposes the implementation of a series of "Habitat Conservation Areas" (HCAs). In effect, the Category one HCAs are specific areas encompassing as much as 80,000 acres of potential owl habitat.

Answer: The O&C checkerboard land pattern has always presented some complications for forest management and conducting timber sales. This will still be the case if the Interagency Scientific Committee's recovery plan were to be implemented. The O&C land pattern limits our ability to shift planned sales away from HCAs due to the fragmentation effect on non-HCA land providing the substitute sales. The HCAs include both BLM lands and adjoining private ownerships. BLM would be responsible for protecting owl habitat on Federal land, but not on private lands. However, the presence of spotted owls, if the species is listed, on adjoining private lands could place constraints on BLM operations.

40. Question: Because the O&C lands in western Oregon are interspersed with private lands (i.e. the checkerboard), what problems would you have if you were directed to implement the Jack Ward Thomas report?

Answer: Beyond the problems noted above the interspersal private lands in the O&C has required numerous right-of-way agreements for access across both Federal and private ownerships. If the report were implemented or if the owl were to be listed, it is possible that owl impact considerations could affect road access to private timber that might otherwise not be effected if it were outside an HCA.

41. Question: How would you manage an HCA when 50% of the checkerboard is private land?

Answer: BLM would manage the portion of the HCA that is Federal land for which we are responsible. BLM is not responsible for the management of the private lands within an HCA. This would be a matter between the private land owner and the FWS or the state fish and wildlife agencies.

42. Question: How would you create owl corridors between HCAs when 50 percent of the checkerboard is private land?

Answer: Habitat corridors need not be contigious to be effective for many species of wildlife, especially for spotted owls. Large and small blocks of habitat well dispersed through the landscape may provide adequate corridors for mobile species like the spotted owl. Other existing conservation requirement; such as the Oregon Forest Practices Act which requires state and private landowners to retain riparian zones along streams could help augment the owl corridors. These riparian zones for example could connect with BLM riparian zones to provide travel corridors for wildlife including the spotted owl.

It is my understanding that a significant amount of research on the owl habitat has been done on Forest Service and BLM lands which are available for multiple use.

43. Question: On what land ownerships have owls been found? On what land ownerships have owls not been found?

Answer: Spotted owls have been found to inhabit all the represented land ownerships in Oregon including federal, state and private forest lands. Generally, spotted owls have been located where ever suitable habitat exists.

44. Question: What type of inventories have been done on Park Service land, wilderness areas, private timber lands and state lands?

Answer: The intensity and acreage of spotted owl inventories on lands other than BLM or Forest Service lands in Oregon is limited. National Park lands have been inventoried on several occasions, and a few owls has been located in the restricted amount of suitable habitat. The two wilderness areas managed by BLM both contain spotted owls. The State of Oregon has conducted some low intensity inventories on state lands, but few private lands have been systematically inventoried for spotted owls. BLM has located several spotted owl sites on adjacent private lands while conducting inventories on BLM lands. The major private landowners have indicated their intent to do an inventory on their lands.

Recreation 2000

45. Question: Mr. Jamison could you briefly explain the concept of recreation 2000 and why it is a priority of the BLM?

Answer: To guide the recreation management program over the next decade, the BLM prepared Recreation 2000: A Strategic Plan in 1988. This plan provides a clear statement of the BLM's recreation management policies and goals, and highlights where the BLM intends to concentrate efforts in all recreation-related programs, including recreation resource management, facilities maintenance, access, land acquisition, construction, and others. In 1989, the BLM prepared national and State implementation plans to carry out the objectives of Recreation 2000 and began to carry out priority action items in 1990.

The Public Land administered by the BLM has the most potential of all lands managed by the Federal Government to provide the widest range of opportunities for diversified recreation, local economic benefits, and conservation of our Nation's natural and cultural resources. The 270 million acres of Public Land in the 11 Western States and Alaska represent as much land as the acreage of the National Park and National Forest Systems combined. The implementation of Recreation 2000 is critical to properly manage the growing use of the Public Land for outdoor recreation within the context of the BLM's multiple use mission.

46. Question: Why is it necessary for the Interior Department to purchase more lands from private ownership to fulfill the needs of Recreation 2000?

Answer: Due to the historic nature of land disposal patterns during the development of the West, critical and unique parcels of lands often went into private ownership. Today, these parcels have been determined, through the land use planning process, to meet a critical need for efficient and effective management of surrounding or adjacent Public Land. The 1991 BLM land acquisition projects are proposed to meet a critical need for protection of natural and cultural resources, provide more effective protection and management in areas receiving increased recreation use, or meet an acquisition objective already mandated by Congress. This land acquisition initiative is consistent with the objectives of Recreation 2000, which identifies the need to consolidate land ownership to provide high value recreation opportunities and ensure physical and legal access to the Public Land. The land acquisitions implementing Recreation 2000 are primarily directed toward properties in Congressionally designated areas, Wild and Scenic rivers, National Conservation Areas and wilderness areas, which protect critical resources and enhance recreational opportunities for present and future generations. Highest priority is given to the acquisition of inholdings within these areas where the threat of damage to resources in the designated area has been identified.

47. Question: Does the Agency understand the implications of purchasing private lands in states like Idaho which are already 65 percent Federal and State owned? Will further purchases be necessary in the future or can I expect this to be the final list?

Answer: Our preferred method of acquisition in all cases is by land exchange which will not increase the Federal land base. The impact on the State due to the acquisition of additional Federal lands is a consideration in all project management plans. Extensive public input is encouraged in all phases of project development, from the initial evaluation for special designation of an area through preparation of management plans and implementation of acquisition activities in acordance with the plan. This input includes contacts with State, county and city governments, and with interested private entities.

48. Question: There are eight land acquisition requests in the FY 91 Budget request for Idaho ranging from 93 acres to 7,162 acres. The cost will be $10,848,000. I would like to know who currently owns these lands and if they would be willing to sell to the Federal Government. Please provide me with maps of the individual Properties showing the location of the site on a State map, specific site location maps, and a listing of owners. It would be helpful if you provided a list of neighboring lands identified by owner. Please make this identification on the maps also. It will be helpful to me to know who else may be impacted by the sale.

Answer: The requested maps and information have been supplied by the BLM Idaho State Office directly to Senator McClure's office.

49. Question: Are all sales to be on a willing buyer -- willing seller basis or will the Interior Department use its condemnation powers to acquire these lands? If owners are willing to sell why are they willing to sell?

Answer: All acquisitions on Idaho projects will involve willing sellers. Federal condemnation authority, where it exists, will not be used. Many properties are already listed for sale with realtors before the BLM makes an offer to acquire the property. Landowners in Idaho and elsewhere have many reasons for selling including: 1) support for the project; 2) receipt of fair market value in areas of slow or depressed real estate markets; 3) BLM's flexibility in methods and type of granting, such as land exchange, scenic or conservation easements, and life estate reservations; 4) prompt and full payment by BLM for the acquired lands.

50. Question: How are the sale prices set? Who does the appraisals? Are these appraisals challengable by either the seller or the buyer?

Answer: The agency's offer of just compensation is based upon an impartial appraisal prepared by qualified agency or private appraisers. The appraiser(s) verify and inspect other comparable land sales, and based upon their analysis make an estimate of fair market value. BLM reviews the appraisals and approves an amount to be offered to the property owner. The offered amount may not be less than the BLM's approved appraisal of fair market value.

50. Question: Who does the appraisals?

Answer: The appraisals are prepared by qualified agency or private appraisers who have the training and experience necessary to competently prepare the appraisal report. The appraiser(s) are selected and/or approved by BLM.

52. Question: Are these appraisals challengeable by either the seller or the buyer?

Answer: On all BLM acquisitions, landowners are invited to accompany the appraiser on the field examination of the property and to present their views for consideration in the valuation process. After the values are approved by BLM, they still may be challenged by the owner. The property owner may present information not considered by the appraiser or the reviewer in estimating the value. This includes additional market information or features overlooked during the appraiser's inspection of the property. The appraiser will consider any new information affecting value provided by the owner and, if appropriate, will revise the appraised value based on this information.

53. Question: Has BLM or Forest Service held informational meetings in the counties effected on their desire to purchase these lands? Has the BLM or Forest Service looked at the loss in tax revenue eash county would suffer from the removal of these lands from the tax base? Does BLM or Forest Service plan to meet with the county commissioners of each county to review any concerns the county may have over these land purchases?

Answer: The BLM has met with county officials in all counties in which land acquisition projects are located, and the potential loss of county tax revenue is addressed at these meetings. BLM's policy is to first attempt to acquire all tracts by exchange. In addition to being cost effective, they also preserve the county tax base. We also attempt to acquire conservation and scenic easements where possible in lieu of fee simple purchase so that the land remains on the tax rolls.

Boise Interagency Fire Center

54. Question: Mr. Chairmen, I have one final question for Mr. Jamison. The Boise Interagency Fire Center or more commonly called "BIFC", operates in the event of a Fire Emergency on Federal Lands in the West. Normally they are very busy in the summer and fall months fighting fires throughout the western states. However, there are at times years when fires are not very large or long lasting. Can you give me your view on whether or not BIFC is being used to its maximum efficiency? Could the expertise at BIFC be used in response to other natural disasters?

Answer: The BLM is the host agency for six Federal agencies located at the Boise Interagency Fire Center. BIFC was established 25 years ago to improve the coordination of fire support activities among Federal and State firefighting agencies. That goal has remained constant but the mission and operations have evolved since BIFC was established. Actively, only a small percentage of the activities occurring at BIFC are directly related to logistical support of large wildfires. Most of BIFC's full-time, year round professional and technical employees work on a full spectrum of fire management activities. Although these employees do use their special expertise during fire emergencies, their primary purpose is to design, develop, manage, coordinate and evaluate fire management systems, concepts and equipment for Federal land managing agencies. It is a full time job to support the BLM's program of fire suppression, prescribed fire and fuels management.

BIFC is utilized to its maximum efficency by having a year-round regular complement of personnel which is augmented by seasonal employees during the average 6 month period that national level fire coordination is necessary. During the remainder of the year, the permanent BIFC logistical support staff has full-time responsibility for national contract administration, Regional Fire Center coordination, training, statistical analysis and reporting, and logistical support to other lead agencies for natural disaster response actions. BIFC's responsibilities during fire emergencies are not restricted to the western United States. Logistical and material support is provided to wildfire suppression in the southeastern, northeastern and central portions of the United States Wildland fires may burn somewhere in the United States during any part of the year and BIFC is usually requested to provide logistical and coordination responses for these efforts.

In the past few years BIFC support for response to national disasters such as oil spills, earthquakes, volcanic eruptions and hurricanes, has been increasing. Although competition for firefighting resources and skilled personnel on non-fire disasters is a potential issue, the primary purpose of BIFC has not been compromised to date. BIFC is able to continue to provide limited support to other lead agencies in the area of non-fire activities without jeopardizing its primary fire support coordination role. A recent General Management Evaluation of BIFC recommends that a review of BIFC roles and responsibilities, particularly as they relate to non-fire activities be conducted. This review will be occuring in the near future.

QUESTIONS SUBMITTED BY SENATOR DENNIS DeCONCINI

Bureau of Land Management

Gila Box Riparian National Conservation Area

1. Question: The Arizona Wilderness bill currently in Congress contains provisions to create the Gila Box National Conservation Area in Arizona. What level of funding would be needed to properly manage this area if the legislation is enacted in its present form?

Answer: If the area is designated as the Gila Box Riparian National Conservation Area (NCA), an annual funding level of approximately $655,000 would be required for management. This amount would be needed to develop a management plan for the NCA, which the proposed legislation mandate us to complete within 2 years. Funds will also be needed to initiate management and protection actions such as signing and mapping the NCA boundaries, recreation site planning, inventorying riparian areas and cultural resources, stabilizing archaeological and historic sites, improving wildlife habitat through additional challenge grant projects, and maintaining roads, fences and recreation facilities.

2. Question: What is the level of funding in the FY 1991 Budget Request for the management of this area?

Answer: The FY 1991 Budget continues the FY 1990 funding level for this area of approximately $100,000. Depending on the final appropriations level and program priorities in other States, a portion of the requested 1991 increases for recreation, wildlife, cultural resources, facilities maintenance and several other subactivities could be allocated to the Arizona State Office for use in managing the Gila Box NCA, as well as other Public Lands in Arizona.

San Pedro Riparian National Conservation Area

3. Question: What is in the FY 91 budget request for the management of the San Pedro Riparian National Conservation Area? Will this amount meet the needs of this area? If not, what level is needed to properly manage the area?

Answer: The 1991 President's Budget continues the FY 1990 funding level for the San Pedro Riparian National Conservation area of approximately $770,000. Estimates developed by the BLM Arizona State Office indicate that approximately $1,200,000 in 1991 would be the optimum funding level for management of the area. The FY 1991 President's Budget requests increases in the rangeland management, cultural resources, recreation, facilities maintenance, soil/water/air, and wildlife habitat management subactivities. Within the context of Bureauwide program priorities, a portion of these increases could be made available to Arizona for work in the San Pedro Riparian National Conservation Area.

4. Question: I understand that there are several construction projects proposed within the National Conservation Area. What are they and how much funding is needed in FY 91 to commence work on them?

Answer: The projects proposed for construction in the San Pedro NCA include the following facilities:

Project Component	Preliminary Cost Est.
Visitor/ Education Center and Administrative Offices	$ 1,950,000
Research Center	3,000,000
Reconstruction of Mercantile Store & San Pedro House	490,000
Warehouse/Maintenance Building	170,000
Parking, access roads	175,000
Utility construction	100,000
Landscaping	50,000
40 unit campground	300,000
Picnic area	60,000
Main road - 8 miles with interpretive pullouts	475,000
Visitor center displays	400,000
Design, 10% contingency	830,000
TOTAL	$ 8,000,000

If funding were provided in FY 1991, BLM would develop a contract for engineering design work followed by a contract for construction of the facilities. Actual construction of the planned facilities would take place over a 2 to 3 year period.

Black Canyon and Lake Pleasant Resource Conservation Areas

5. Question: I understand that Public Law 100-696, the Arizona-Idaho Conservation Act of 1988, directed the BLM to acquire certain state lands in the Black Canyon and Lake Pleasant areas. What is the status of these acquisitions?

Answer: The Interior Field Solicitor in Phoenix has provided the BLM Arizona State Office with an opinion which identifies discrepancies in Title V of the Arizona-Idaho Land Conservation Act of 1988 (P.L. 100-696) which make it impossible to carry out the intent of the Act. BLM is using condemnation procedures to acquire about one-third of the Black Canyon area. However, because of a $26 million difference in the value of lands to be acquired versus transferred, it appears that the remainder of the Black Canyon area and all of the Lake Pleasant area cannot be acquired until certain technical amendments are made to P.L. 100-696.

6. Question: Could you elaborate on what types of recreation use is occurring in these areas? Are these recreation uses impacting the resources in these areas? If so, how?

Answer: In the Lake Pleasant area, recreational uses are primarily water-oriented and include swimming, fishing, and boating, as well as picnicking and hiking. The Black Canyon area contains a hiking and equestrian trail. Both areas also have off-road vehicle use. The Lake Pleasant Regional County Park receives about one million visitors annually and is expected to receive an estimated four million visitors annually by 1994. The increased use, coupled with the rapid population growth in the north Phoenix area, is expected to create significant impacts on Public Lands. These resource impacts could include illegal ORV use, cactus and wood products theft, riparian and wildlife habitat damage, cultural resource vandalism and theft, erosion, and deterioration of water quality.

7. Question: What is the current level of funding for the management of these areas and what level of funding will be needed in FY 1991 to properly manage the areas once the acquisition is completed?

Answer: The FY 1990 funding level for these areas is approximately $32,000 in recreation resources management. Assuming acquisition is completed, a total funding level of $365,000 would be the optimum funding level needed in FY 1991, for programs including cultural resources, recreation, wildlife habitat, resource protection, and others. The 1991 President's Budget includes increases in these programs. If funds are appropriated at the level of the Budget request, it is anticipated that Arizona will receive a share of the additional funding according to Bureauwide program priorities. The Arizona State Director may allocate additional funding to these areas depending on other needs in the State.

Wilderness Management

Question: The Arizona Wilderness bill currently in Congress will designate certain BLM lands in Arizona as Wilderness Areas. What impact will this legislation have on BLM resources if it is passed in its present form?

Answer: The proposed legislation would designate 38 additional wilderness areas under BLM jurisdiction in Arizona. Most wilderness study areas (WSAs) not designated as wilderness would be released from interim management under the bill. Two WSAs, however would still be subject to the interim management policy (IMP). In the short term, this legislation would affect BLM's wilderness management, cadastral survey, lands and realty, and mining law administration programs.

Within Arizona's wilderness management program, some funding could be shifted from interim management of WSAs and preparation of wilderness study reports to accommodate the new wilderness area management workload. However, this partial redirection of funding is not sufficient to address all of the additional immediate needs. Funding would have to continue to be provided for interim management of the two WSAs and for implementation of wilderness management plans for the 9 currently designated wilderness areas in Arizona. Immediate workloads which would result from the designation of new wilderness areas include: continued ground and/or aerial patrol and surveillance; preparation of wilderness management plans; survey, marking and fencing of wilderness boundaries; resource protection projects in critical areas; mining claim validity examinations; and development and distribution of maps and public information materials.

Question: What funding is presently being directed to wilderness management in Arizona and what level of funding will be needed if the legislation is passed in its present form?

Answer: The current funding level allocated to Arizona in the wilderness management subactivity is approximately $765,000, of which about $200,000 is devoted to management of the 9 existing wilderness areas. In addition, the FY 1991 budget includes small amounts within other subactivities for managing resources within wilderness areas. Approximately $580,000 within the land acquisition account in FY 1990 is devoted to acquiring private inholdings in Arizona wilderness study areas.

The FY 1991 President's Budget does not provide funds to accommodate potential new wilderness designations in advance of BLM's wilderness reporting process. If the legislation is passed as proposed, additional funding totalling $2.0 million above the 1991 President's Budget would be needed to deal with immediate requirements of wilderness designation. These funding needs are spread across several subactivities including wilderness management, cadastral survey, lands and realty, soil/water/air management, and mining law administration. An increase of $1,200,000 would be used in the wilderness management subactivity to begin preparation of wilderness area management plans for 4 of the 38 expected new areas. BLM projects it will take 6 years to complete all of the wilderness management plans. This amount would also be used for boundary signing, mapping, preparation and distribution of public information materials, and coordination with public land users concerning wilderness area restrictions.

In addition to the wilderness management subactivity, approximately an increase of $40,000 would be used in the mining law administration program to conduct 2 validity exams on mining claims within the designated wilderness areas prior to approving plans of operations as required by regulation. An increase of $600,000 in cadastral survey would allow for survey and monumenting of approximately 300 miles of wilderness area boundaries in priority areas. To acquire 6,000 acres of inholdings through State exchanges, an increase of approximately $100,000 would be needed in lands and realty management. An increase of about $60,000 would be used in the soil, water and air management program for water rights documentation on about 30 water sources, including river, streams, and springs.

Barry M. Goldwater Air Force Range

10. Question: I understand that Public Law 99-606 assigned BLM natural resource management responsibilities on the Barry M. Goldwater Air Force Range (BGR). What additional workload has it created?

Answer: The Act assigned to BLM the natural resource management responsibilities on the 1.8 million-acre Barry M. Goldwater Range. The law stipulates that a land use plan must be prepared and released by BLM before November 2, 1989. The land use plan was completed in October, 1989.

The record of decision on the land use plan and a Memorandum of Understanding among BLM, the Air Force and the Marine Corps will be ready for implementation in late 1990. Management emphasis identified in the plan included five major areas: (1) wildlife and botanical management, with priority placed on threatened and endangered species; (2) recreation management and planning, including resource protection and law enforcement; (3) cultural resources management; (4) management of Areas of Critical Environmental Concern and special areas; and (5) additional on-the-ground personnel to meet the resource needs. The plan calls for development of program specific activity plans and other actions, consistent with the plan.

11. Question: What is the current level of funding for the BGR and what is needed to carry out the mandated responsibilities?

Answer: BLM estimates that approximately $30,000 is being used for wildlife and recreation management in the BGR in 1990. Based on the land use plan decisions, an estimated $320,000 would provde the optimum level of funding the management of the area. This funding would be used in the recreation management, rangeland management, wildlife habitat management, cultural resources management, and wild horse and burro management programs. It is anticipated that increases in several of these programs requested in the President's Budget will provide additional funding for the BLM Arizona State Office to use in priority areas such as the Barry M. Goldwater Air Force Range.

Empire Ranch

DC-12 Question: I understand that BLM has acquired through a land exchange, an area known as the Empire Ranch which has signficant natural resource values. What are BLM plans for the area?

Answer: Approximately 40,000 acres from three different ranch properties were obtained by exchange in 1988. The area was acquired by BLM to protect the valuable riparian habitat and other natural resource, open-space values of the area. To manage the riparian, recreational, cultural and scenic values, BLM plans to develop and implement a coordinated resource management plan. Other long-term actions include rehabilitation of the Empire Ranch Headquarters buildings, and maintenance of other buildings on the property.

13. Question: What is the current level of funding for the area and what funding level is needed to properly manage the area?

Answer: Approximately $215,000 is currently devoted to managing the area. This amount covers several programs, specifically range improvements, facilities maintenance, rangeland management, recreation and wildlife habitat management. For optimum future management of the resources of the area, BLM has estimates that a total funding level of approximately $470,000 would be required in a variety of subactivites. In addition, approximately $825,000 has been identified for construction projects on the Empire Ranch.

Safford District Office

I understand that the Safford District Office in Arizona is in dire need of new office space.

14. Question: What is the present situation?

Answer: The existing leased office facility does not provide adequate space and facilities for current personnel. Office space is only one-third of the space required, while the warehouse provides only half of the storage required for goods and equipment. The 26 parking spaces are inadequate for the 62 BLM employees and members of the public.

15. Question: Is a new site available and how much will it cost to construct a new office? What is the Bureau's capability in FY 91?

Answer: Yes, an office site is available, consisting of 12 acres of Public Land located within the Safford City limits. Plans call for the proposed new office to be a joint facility with the Forest Service, Safford District Ranger Office, and the Soil Conservation Service. Co-location of offices would improve operating efficiency and service to the public. This location/facility has been endorsed by the Safford City Council, the Graham County Supervisors and the Graham County Chamber of Commerce.

Estimated facility construction costs are:

Engineering/design work	$ 125,000
Building construction	$2,021,000
Utility construction	$ 163,000
Contingency	$ 219,000
TOTAL	$2,528,000

These funds are not requested in the FY 1991 President's Budget. The Safford District is the BLM's top priority for getting new leased space from GSA. We expect this to occur within the next 6 to 9 months. Thus, new construction is not needed.

QUESTIONS SUBMITTED BY SENATOR MARK O. HATFIELD

Bureau of Land Management

Spotted Owl

1. Question: For FY 1990, the Appropriations Committees provided $550,000 for spotted owl studies on O&C Lands. Please update the Subcommittee on the progress of this research. What funding levels, if any, are necessary for this program in FY 1991?

Answer: The funds provided for spotted owl studies on O&C lands were used by BLM to establish five new density/demographic study areas to determine and compare the density of owls across a range of general landscape patterns. Other objectives include the determination of annual rates of occupancy, turnover, and productivity. Three new habitat use/home range study areas (using radio telemetry) have been established this fiscal year in physiographic provinces in Oregon which have not had previous studies on the spotted owl. The funding also allowed the continuation of ongoing habitat use and demographic studies.

In FY 1991, BLM has identified a funding increase of $1,600,000 to accomplish the workload associated with spotted owl management including the biological support required to support the forestry program. This funding level would also provide statistical analysis of BLM's current spotted owl monitoring data base in conjunction with an operational Geographic Information System.

Wild and Scenic Rivers

2. **Question:** In 1988 the Congress passed the Omnibus Oregon Wild and Scenic Rivers Act. This legislation added segments of 40 rivers to the National Wild and Scenic Rivers System. According to the Wild and Scenic Rivers Act of 1968, the federal managing agencies have three years to complete the management plans for Federally designated rivers. Please provide the Subcommittee with a progress report on your efforts to complete the management plans on the BLM's segments of the Oregon rivers.

How much money was allocated to this project in FY 1990? Do you have any doubt that the management plans will be completed within the three year time limit? What levels of funding are necessary to ensure that the management plans are completed in a timely fashion?

Answer: At the State office level, the BLM is working with an Interagency Wild and Scenic Rivers Team, comprised of BLM, Forest Service and State Park personnel, to coordinate the statewide planning effort. The river planning effort is being conducted at the BLM District level and is in the beginning stages of assessing resource values for individual rivers. These assessments will be completed on several rivers by late spring and some public hearings have been conducted for scoping and information purposes.

We anticipate completing the majority of river management plans by fall 1992 within the required 3 fiscal years from date of passage of the Act.

In 1990, $455,000 was allocated to this effort. $655,000 is included in the 1991 President's Budget, and $950,000 will be required in future years to complete river management plans on schedule.

Firefighting

3. Question: According to reports that I have received, it is highly possible that the summer of 1990 may be a bad fire year in the Pacific Northwest. What steps are being taken now to minimize the possibility of forest fires, and do you have an estimate of how much money will be required for fire suppression this summer?

Answer: BLM recognizes the possibility of a severe 1990 fire season based upon the Palmer Drought Index rating of severe drought and the lack of normal precipitation.

In order to be prepared for a severe fire season the BLM Vale District is training an additional 5 Snake River Valley (SRV) Firefighter Crews (100 firefighters) and 5 SRV crew representatives. This will make a total of 30 SRV crews available.

The land managing agencies in Oregon and Washington including BLM participate in shared resources that include eight air tankers, five lead planes, 55 smokejumpers, 10 hotshot crews, 30 SRV crews, and 10 light helicopters.

In addition, we understand that Forest Service Region 6 is requesting funding for additional fire protection resources. These will include air tankers, helicopters, smokejumpers, and additional ground resources which could also be shared with BLM.

Fire prevention efforts include:

- Smokey Bear and Professional Athlete at sporting events (baseball & rodeo).
- updating of fire prevention action plans and activities.

The cost of firefighting is difficult to predict because it is related to the severity of the fire season and tied to weather elements (temperature, moisture, wind, lightning) and the activity of people. Recent average yearly firefighting costs for Oregon are $4,646,000. Severe fire season costs would exceed this average.

Since the Oregon Department of Forestry protects BLM lands in western Oregon, that agency is also making preparations for the increased risk.

Oregon/Washington Riparian Enhancement Project

4. Question: Please update the Subcommittee on the Oregon/Washington Riparian Enhancement Project.

Answer: The Oregon/Washington Riparian Enhancement Plan was initiated in 1988. The Plan identifies the opportunities for riparian area improvements in only the eastern Oregon and Spokane Washington BLM District Offices. The "Plan" identifies three major components to the program. These include: planning and design, implementation, and monitoring. The following table is a summary of the projects completed in FY 1988, 1989, and planned for 1990.

Table 1

Item	unit of measure	FY 1988	FY 1989	FY 1990	Totals
		Accomplishments by fiscal year			
Reservoirs	number	14	17	14	45
Spring developments	number	16	44	45	105
Water holes	number	12	0	0	12
Wells	number	0	2	1	3
Pipelines	miles	0	6.5	1.5	8
Fences	miles	34	64	29	127
Streambank protection	miles	13	7	6	26
Instream structures	number	2	0	0	2
Vegetation manipulation	acres	3450	5330	940	9720
Seeding/planting	acres	0	2638	4510	7148
Prescribed burning	acres	6960	315	5930	13205
Dikes	number	0	11	0	11

Aircraft Management

5. Question: In light of the tragic airplane crash near the Steens Mountain which claimed the lives of several Oregon BLM employees, I am concerned that safe and adequate aircraft are available to employees of Oregon BLM. Please provide the Subcommittee with a description of your current procedures with respect to air travel around the state. Are your current arrangements for air travel adequate? How many aircraft are currently owned and operated by BLM? How does this number compare to other federal agencies such as the Forest Service, Bureau of Reclamation, U.S. Fish and Wildlife, etc.?

Answer: Current procedures for use of charter aircraft include very specific safety requirements. These requirements include certification of pilots and aircraft, and routine safety inspections of aircraft. A flight safety officer is designated for each flight who insures compliance with all procedures including development and compliance of of an approved flight plan, routine radio check-ins, etc. The safety procedures are very thorough and are effective in ensuring the safety of our employees.

Regular scheduled air carriers currently serve only five of Oregon BLM's 10 districts. Air travel to the other five districts, and other rural locations requires the use of rental/charter services.

BLM currently operates one owned aircraft, a DeHavilland Twin Otter, based in Boise, Idaho. Its principal mission is for dropping smokejumpers on wildfires.

Estimate of other agency-owned and fleet-managed aircraft is:

Forest Service	35
Bureau of Reclamation	10
Fish and Wildlife Service	21
Bonneville Power	6
National Park Service	7

Oregon and California Grant Lands

6. Question: For FY 1990, Congress approved specific legislative language which allowed BLM to retain its excess timber receipts on O&C Lands and to use those funds for reforestation and forest development and timber management. The major purpose for enacting this provision was to provide BLM with the necessary resources to reduce its reforestation and forest development backlog. Please provide the Subcommittee with an update on this backlog. Does a backlog still exist? How much in excess receipts did BLM receive? If a backlog still exists, what level of funding is required to eliminate the backlog? What is the request for reforestation and timber development for the O&C Lands for FY 1991? If this level is approved, how much of the backlog will be left at the end of FY 1991?

Answer: BLM has used excess O&C receipts to supplement the regular appropriations to help reduce the forest development and reforesta~~tion back~~log. The "excess receipt" funding availability for reforestation and forest development has been planned for $13.6 million in 1990 and $5.6 million in 1991. This funding begins to reduce the backlog but a substantial amount is still anticipated to remain at the end of 1991 as indicated in the following table:

ANALYSIS OF TREATMENT NEEDS

	Site prep. (acres)	Reforest. (acres)	Plant. Maint. (acres)	Pre-Comm. Thinning (acres)	Fertil. (acres)
Total 1990 Treatment Need 1/	72,300	55,700	172,300	57,700	140,800
Proposed 1990 Treatments	26,600	41,000	65,200	14,400	24,300
Proposed 1991 Treatments	21,200	35,400	42,4200	5,500	9,300
Expected Treatment Needs Needs at 1991 EOY 1/	44,500	19,300	99,900	50,000	129,400
Acceptable Level of Annual Carryover 2/	-7,000	-10,000	-24,400	- 2,500	-12,900
Net Acres Available with Opportunity for Treatment at EOY 1991	37,500	9,300	75,500	47,500	116,500

1/ Includes new annual needs coming "on line" during the fiscal year.

2/ This represents an average amount of untreated acreage that under normal conditions, would not likely be available for treatment.

It is estimated that it would require $42.3 million to accomplish the work necessary to eliminate the 1991 EOY carryover acreage of Available Treatment Opportunities. A manageable level of workload of treatments would suggest that this work would best be accomplished over a 3 year period. This would result in an estimated funding level of $14,100,00 and 61 FTE per year for 3 years beginning in 1991. There are high priority needs within each treatment type, therefore, a balanced program for accomplishment would include acres of all treatments each year. This funding requirement would be in addition to a base level of funding that would prevent further accumulation of excessive carryover treatment needs.

7. Question: Recent efforts to assess the effect of the Thomas Interagency Scientific Committee's proposed Spotted Owl Conservation Plan clearly underscored the extraordinary usefulness and value of the Western Oregon Digital Data Base (WODDB) system.

Accordingly, why does your FY 1991 O&C budget request seek a $477,000 reduction in your Western Oregon Information and Data Systems program? Considering the drastic need for accurate and reliable data on spotted owls, old growth forests, and other issues, it seems unwise to reduce this program under the current circumstances. Is this program fully operational at the present time?

Answer: The reduction that was originally requested was due to an anticipation that there would be a reduced need in the level of support needed for planning during 1991. This may no longer be an accurate assumption. The proposed decrease would now correspond to a deferral of the completion of the resource management plans until 1993.

The WODDB data base is not fully operational at this time. Entry of the resource data themes to make use of the data base easier for field personnel is expected to be completed by fall 1990. Key WODDB activities for FY 1991 include the following: additional software development; digitizing the contours to complete entry of the base map data for WODDB; production of acreage runs for each alternative in the Resource Management Plans; user support; data base management for tracking files to ensure data accuracy; and Prime computer operations. The need for several of these activities including user support, data base management and computer operations, will continue to exist to support the operational data base that will be used during and well beyond the planning effort.

8. Question: Please provide us with an update on the western Oregon Land and Resource Management Planning process. Considering the fact that you are at least two years behind your original schedule for completion of these plans, how can you possibly justify a reduction of over $1 million in your FY 1991 budget request? When will the first draft plans be released? When will the final plans be released? What difficulties do you expect to face in implementing these new plans, what do you suggest to remedy the problem to assure final plan implementation?

Answer: The President's budget proposal includes $1,118,000 for resource management planning in Western Oregon and $500,000 in data management for WODDB automated support of the planning effort. These estimates were made based on the situation as it was known approximately one year ago when the Budget was being formulated.

Under our existing schedule:

- our first draft plans will be released about September 1991.
- our final plans will be released about June 1992.
- implementation of the plans would begin on October 1, 1992

Expected difficulties in implementing these new plans include the uncertainty regarding potential litigation related to the F&WS listing process and recovery plan development for the spotted owl and potential litigation and injunctions related to the new RMP implementation. It is too early in the planning process to suggest remedies for potential problems that are not yet clearly defined.

In light of possible incorporation of alternatives for mitigating spotted owl impacts and other complex issues for these lands, it is possible that the reductions proposed in the President's Budget may have to be re-evaluated in light of current conditions.

9. Question: Please provide the Subcommittee with an update on the timber sale pipeline for western Oregon. What percentage of the FY 1991 timber sale program for western Oregon will be prepared by October 1, 1990? Please provide the Subcommittee with a full explanation of your difficulties in preparing timber sales for FY 1991.

Answer: It is estimated that about 25% of the FY 1991 plan will be prepared by October 1, 1990.

The difficulties in preparing the FY 1991 timber sales are:

- **Preservation of options for future implementation of the Interagency Scientific Committee Report.**
- **Uncertainty about whether the spotted owl will be listed on June 23, 1990.**
- **If listed, uncertainty about the nature and geographical scope of the listing.**
- **Increased workloads in analyzing and processing candidate sales in consideration of the above.**

With such uncertainty, it is difficult to develop substitute planned timber sale tracts, since this also involves archaeological and botanical clearances as well as other sale preparation requirements.

10. Question: I am currently considering various courses of action to maintain a stable timber supply in western Oregon if the spotted owl is listed as a threatened or endangered species by the U.S. Fish and Wildlife Service on June 23. What good will any action we might take be if there are not adequate numbers of timber sales prepared for FY 1991? How long does it take to prepare an average timber sale? Do you have suggestions as to how to shorten the length of time it takes to prepare timber sales without affecting the quality of the environmental assessment for the sale?

Answer: We believe that we can offer the proposed 1991 timber sales; however, preparation of these sales will largely be accomplished in 1991. Approximately 25% will have been completed prior to the beginning the year. Time needed for development of a timber sale plan for a particular sale tract could vary from 18 months to 3 years, depending on the complexity involved. A 3-year timeframe involves such support needs as road easement acquisition across private lands, running survey line, setting section corners and road engineering design. Through our long range timber sale program there are some areas proposed for sale development that may already have some of this work completed. As time passes and the period of uncertainty continues, it becomes more difficult to maintain any semblance of organization and structure to a timber sale plan and consequently lead times are lost.

Our district office personnel have considerable experience in working with the FLPMA and NEPA requirements through their interdisciplinary teams. We do not know of any additional short-cut methods to expedite sale preparation.

11. Question: What is your strategy for accomplishing your FY 1990 timber sale program in western Oregon. How much of the FY 1989-1990 program covered under Section 318 remains to be offered? Can you complete the program in the remaining 5 months of the two year period? Will we need to incorporate language in the 1991 Appropriations Bill to allow you to complete the sale of the 1989-1990 timber sale program?

Answer: Absent the listing of the owl, we plan to carry out the requirements of Section 318. As of May 1, 1990, 634 MMBF remains to be offered (1,900 MMBF - 1,266 MMBF). No special language is needed at this time.

12. Question: Does your FY 1991 budget request contain enough funds to accomplish presale planning for the timber program in the out-years? Over what period of time and with what funding level will it be possible to restore the western Oregon timber sale pipeline?

Answer: **In order to restore a 950 MMBF western Oregon "pipeline" of prepared timber sales it would be expected to take 3 years, of an average of an additional $7,400,000 per year. This level of funding is needed to prepare timber sales which are sound from a forestry and environmental perspective and procedurally sound to stand up under close scrutiny in administrative or legal challenges. This estimate does not consider the Interagency Scientific Committee report nor the possible listing of the owl by as threatened.**

13. Question: How well do you think Section 318 has worked? Do you believe that it has been successful? Have the timber sale advisory boards functioned as we originally intended?

Answer: Section 318 has worked as a stop-gap measure to allow the offering of timber sales prior to the implementation of the new resource management plans in 1993. It provided a mandate and procedure that enabled us to get the job done at this point in time.

Some timber sale advisory boards functioned more smoothly than others. It provided a forum by which the issues regarding the northern spotted owl were considered by representatives from all sides of the issue.

14. Question: How many timber sales were modified by the timber sale advisory boards in western Oregon? How many timber sales were rejected by the boards? How many advisory boards were unable to approve enough timber sales to meet the districts' volume targets?

Answer: The timber sale advisory boards made recommendations to the districts. A summary of those recommendations as of May 1, 1990 and the extent to which they were integrated into sale decisions are shown on the following table:

Advisory Board Recommendation	Tracts	BLM Action
Proceed	177	Accept (177)
Reject	106	Pending (82) Drop (22) Proceed (2)
No Recommendation	3	Pending (1) Proceed (2)
Modify	35	Accept (19) Pending (6) Proceed (2) Drop (8)
Defer	3	Pending (3)

Advisory boards for the Lakeview and Medford Districts met during April to continue their review of the ranked timber sale plans developed through the informal conferencing process and to make recommendations on individual timber sales. The Medford District Advisory Board will meet again in May to complete the review of FY 1990 timber sales. No other advisory board meetings are planned except for informal status reports and the review of salvage sales in the some districts. The districts are committed to offering the mandated timber volume under Section 318. When not enough sales were recommended by the advisory boards and the districts were unable to substitute other sales (2 districts), reliance was/will be placed on BLM biologists advice and the review by the United States Fish and Wildlife Service.

15. Question: How many timber sales offered in conjunction with Section 318 have been appealed? What is their current status? How many have been litigated? What is their current status?

Answer: As of May 7, 1990, there are 17 sales that have protests denied and appeals timely filed. An Interior Board of Land Appeal decision is still pending on all of the appeals. All 17 sales have been put in full force and effect and are available for logging during the appeal process. No sales have been litigated through the courts.

16. Question: Can you please provide me today with an assessment of the impacts of the Jack Ward Thomas Report if it were implemented in its current form? What are its economic and social impacts in terms of jobs (both direct and indirect), timber sale receipts, and timber volume reductions?

Answer: The assessment of the impacts of the Interagency Scientific Committee Report in its current form are as follows:

Job Loss		Reduction of	
Direct	Total	Timber Sale Receipts	Timber Volume Reduction
3,450	7,670	$165,443,266	733 MMBF (62% of ASQ)

Job losses and timber sale receipt reductions were computed at 1989 timber prices. A full analyses of these impacts is contained in the report.

17. Question: If the Thomas Report is implemented, what problems would you encounter with regard to your checkerboard land pattern with its high degree of private land ownership?

Answer: The foremost problem with the adjacent private landowners would be meeting commitments of our current right-of-way agreements. These agreements are reciprocal, thus there are previous commitments entered into under the terms of the agreements that the government would grant access to private lands across government lands over both existing roads and roads to be constructed in the future.

18. Question: What management authority could you exert over private forest lands if the Thomas Report is implemented? What authority would you have if the spotted owl is listed as a threatened or endangered species?

Answer: The BLM would have no authority over private forest lands if the Thomas Report is implemented or if the spotted owl is listed. The BLM would work cooperatively with private landowners to maximize the possible management options.

19. Question: What are your current plans regarding the Thomas Report? Will you adopt it in its entirety? Will you prepare a NEPA document prior to implementation of the Thomas Report? When will you make this decision?

Answer: For FY 1990, we have instructed western Oregon districts to shift planned timber sales out of the proposed HCA's and substitute other sales wherever possible while still offering the timber sale volumes set by Section 318. During FY 1991 and 1992, timber sales will be planned outside the proposed HCA's and existing Oregon Department of Fish and Wildlife (ODFW)/BLM spotted owl agreement areas in order to preserve management options until the new Resource Management Plans (RMP's) for western Oregon have been completed. A range of land use plan alternatives is currently being developed for analysis that will include options for spotted owl management as proposed in the Thomas report, and where possible, biological diversity considerations. The western Oregon RMP's Record of Decisions are scheduled for completion in late FY 1992 and will include an accompanying EIS.

20. Question: If the spotted owl is listed as a threatened or endangered species by the U.S. Fish and Wildlife Service on June 23, what do you expect to immediately happen to your timber sale program?

Answer: All further timber sales planned, all unawarded timber sales, and all existing timber sales with uncut volume would have to be screened for "may effect" situations on the northern spotted owl. All "may effect" sales then would have to go through formal Endangered Species Act, Section 7 consultation with the United States Fish and Wildlife Service to determine if such timber sales would jeopardize the spotted owl.

Some existing timber sale contracts may have to be terminated or modified and compensation paid if owls are found on the contract area. The 550 million board feet (MMBF) planned to be sold June-September 1990 to meet the 1.9 billion board feet, Section 318 mandate would be reduced by an undetermined amount as a result of any consultations resulting in a jeopardy determination. Similarly, FY 1991 timber sales, now estimated to total 750 MMBF - 800 MMBF at President's budget level without owl listing, would undoubtedly be reduced. The amount of reduction cannot be forecast prior to consultation.

21. Question: Will you have the opportunity to work with the Fish and Wildlife Service on formulating a Recovery Plan for the owl should it be listed on June 23?

Answer: We will have the opportunity to work with the Fish and Wildlife Service to formulate a recovery plan if the spotted owl is listed as a threatened species on June 23.

22. Question: Have you changed your timber management directive in any way since the release of the Thomas Report? If so, how?

Answer: Timber management directives have not been changed at this time. BLM is now actively pursuing development of new resource management plans for the 1990's with implementation scheduled for October 1, 1992 (FY 1993). If we implemented the Interagency Scientific Committee Report (Thomas Report) recommendations at this time it would prematurely arrive at planning decisions, in effect, violating the prescribed land use planning and environmental analysis process under FLPMA and NEPA regulations. The report requested BLM to shift planned FY 1990 sales out of the proposed HCA's wherever possible. BLM plans to take this action where substitute sales are available; however, there will be limited opportunities to make such substitutions due to BLM's committments to the mandated timber sale volumes established in Section 318 of the 1990 Interior Appropriations Act.

23. Question: On what basis do you assume the Thomas Plan will (or should) be adopted virtually as is? Is the BLM considering other management alternatives or adjustments to the Thomas Plan which would assure the owl will not become extinct and which would still allow the BLM to meet its statutory multiple-use management mandate?

Answer: The manner and degree in which the recommendations of the Interagency Scientific Committee Report (Thomas Report) should be adopted by BLM will be determined through analysis of alternatives in the Resource Management Plans (RMP's) currently being prepared for western Oregon lands. BLM will attempt to preserve spotted owl management options until the new RMP's are implemented in FY 1993 by locating timber sales outside proposed HCA's and ODFW/BLM spotted owl agreement areas. In addition to evaluating the Thomas report recommendations, BLM will analyze RMP alternatives for preserving biological diversity that protect forested areas where the habitats of special status plant and animal species (including spotted owls) occur.

24. Question: Will the Thomas Report prevent you from meeting your FY 1989-1990 timber sale targets?

Answer: No, BLM is not required to implement the recommendations of the Interagency Scientific Committee Report, nor does it supersede Section 318 of the FY 1990 Interior Appropriations Act. In fact, the Interagency Scientific Committee report states: "The Committee recognizes that allowances will have to be made for timber sales already under contract in HCA's and for sales necessary to meet Section 318 of Public Law 101-121."

25. Question: How are you integrating the Thomas Report into your FY 1990 timber sale program?

Answer: We have instructed the districts to look for substitute sales wherever possible for those sales within HCA's, but have provided nothing more specific.

26. Question: How will the Thomas Report affect your current land and resource management planning process?

Answer: The Interagency Scientific Committee Report (Thomas Report) will cause us to restructure our criteria for formulation of plan alternatives, to incorporate its recommendations into one alternative in each district plan and to define other alternatives that present useful comparisons to those recommendations.

27. Question: Is the BLM considering attempting to test alternative silvicultural techniques within the proposed HCAs? If so, what kind? If this is not possible, why not?

Answer: BLM is considering testing alternative silvicultural techniques to enhance spotted owl habitat development. However, these tests would take place outside the proposed HCAs. This is what is prescribed in the Interagency Scientific Committee Report.

BLM would propose partial cutting at the stand and landscape level in areas between HCA's in order to provide habitat suitable for owl travel corridors while maintaining some degree of timber production/harvest.

28. Question: Considering current circumstances, what is an achievable ASQ level for western Oregon in FY 1991?

Answer: Barring listing of the owl, a timber sale level of 750 MMBF to 800 MMBF should be achievable. This should maintain options for implementation of the Thomas Report, while maintaining commitments under the BLM/ODFW Agreement. If the owl is listed as threatened, we would have to re-evaluate our timber sale level.

29. Question: Please update the Subcommittee on the conferencing process with the U.S. Fish and Wildlife Service. Also, please describe the degree of coordination between the four major resource agencies with regard to old growth forest information gathering and research efforts, and efforts regarding management of the spotted owl.

Answer: The conferencing process with the Fish and Wildlife Service (FWS) on BLM's FY 1990 timber sale plan was completed in early March, 1990. A total of 314 timber sales were conferenced. During early May, 1990 two additional conferencing meetings with FWS at BLM district offices to process some additional blowdown salvage timber sales which may be substituted for sales with higher impact on the spotted owl.

BLM is continuing to participate in Interagency coordination meetings on the northern spotted owl at both the National and field office levels. Major topics at these meeting often relate to information sharing, standards and guidelines for research and monitoring, and coordinate of management practices for spotted owls. Also, a new Interagency spotted owl subcommittee was recently established in the Pacific Northwest states of Oregon, Washington and California to coordinate spotted management and the wildlife agencies are also parties to this agreement.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Bureau of Land Management

Native American Minerals Program

The BLM has jurisdiction over oil, gas, and other mineral development on Indian trust and allottee lands. The majority of the producing Indian mineral lands are in the Southwest. The BLM's New Mexico State Office, which oversees Indian mineral leases for 50 Tribes in New Mexico, Arizona, and Oklahoma, has the largest Indian mineral program in the Bureau. The Navajo Nation is a major oil, gas, and coal producer, and the Jicarilla Apache Tribe is a major oil and gas producer. Other mineral production involves sand, gravel, limestone, and gypsum. The New Mexico BLM has jurisdiction over 66% of all producing oil and gas leases and accounts for over 43% of the total Indian oil and gas royalty receipts. The New Mexico State Office also oversees 53% of all Indian solid mineral leases and 67% of the royalties received from such leases.

Recent hearings by the Select Committee on Indian Affairs have hightlighted the concern that the Bureau of Land Management has not adequately protected the mineral leases of Indian Tribes and allottees. The Committee found that BLM has not detected and prevented theft and fraud involving oil and gas leases on Indian lands.

1. Question: What steps does BLM contemplate to address the problems that have been identified and to adequately protect Indian mineral leases?

Answer: The BLM's 1991 Budget requests $447,000 and 10 FTE to help provide additional emphesis to the oil and gas inspection and enforcement program, a portion of which would be available for Indian lands. In addition we have already taken the following steps to help address the problem:

a. Added two positions at Headquarters to provide additional policy oversight on Indian matters.

b. Initiated an Indian Outreach Program to provide better cooperation and interchange between Tribes and BLM.

c. Initiated a comprehensive Internal Control Review (ICR) on inspection and enforcement progams on Indian lands. Field work will continue into late 1990 and a report will be issued by summer 1991.

d. Participates in State Program Reviews that include Indian lands.

e. Established an ultimate goal that 100 percent of Indian producing leases will be inspected at least once annually. The goal will be achieved in a staged manner over a period of several years. The staged goal provides that quality Detailed Production Accountability inspections will be conducted annually on at least 50 percent of the inspection items when the goal is fully implemented.

f. Conducted a nationwide Inspection and Enforcement Workshop in Cheyenne, WY in May, 1990. The workshop include a session on Indian issues jointly paneled by Tribal members, BIA, and BLM representatives.

2. Question: What additional resources does BLM need to fully carry out its responsibility to oversee Indian mineral leases?

Answer: The BLM is devoting considerable recources from available oil and gas program funding to oversee Indian mineral leases, including a portion of the $447,000 increase request in the President's budget. Based on recommendations from investigative reports by the Senate Select Committee, the Inspector General, and others, BLM has conducted an analysis of the program and made recommendations on how to improve our oversight of Indian leases. The recommendations suggest we should provide additional recources and management on Indian Lands over the next several years. The strategy proposes incrementally increacing funds in the program by about $4.9 million. I will be making a decision shortly on these recommendations.

Cultural Resources Protection

In 1979, I wrote the Archaeological Resources Protection Act (ARPA) . ARPA toughened the laws protecting archaeological resources on Federal lands by imposing severe criminal penalties for unauthorized excavation, damage, destruction, or removal of archaeological resources. It provides fines up to $100,000 and five years in jail for criminal violations. It also allows Federal land managers to impose civil penalties for violations and grant rewards for information on violations.

In 1988, I authored amendments that lowered the felony threshold for ARPA offenses, made attempted looting of archaeological artifacts on Federal land a crime, directed Federal land management agencies to develop plans for archaeological surveys of their lands, required the agencies to prepare a schedule for surveying those areas that are likely to contain the most important archaeological resources, and mandated that Federal agencies develop processes for reporting suspected incidents of looting of archaeological resources on their lands.

Unfortunately, despite the effective mechanisms of ARPA, archaeological looting continues.

Looting continues because:

1. Prosecution of looting offenses is a low priority;
2. The public is unaware of the effects of looting; and
3. There is inadequate funding for cultural resources management to protect archaeological sites.

We have made progress in recent years on these fronts: More pot hunters are being prosecuted. The public is becoming aware of the problem and that looting is a crime. Funding for cultural resources management has increased.

In Fiscal Year 1981, $4.05 million was appropriated for cultural resources management by BLM. In Fiscal Year 1990, Congress appropriated $6.71 million. In real terms, funding for cultural resources management by BLM increased 23%.

3. Question: In FY 90, at my urging, the Congress appropriated $200,000 for cultural resource protection in the Four Corners Region. Please describe how these funds are being utilized and how this program has improved BLM's ability to combat archaeological looting. Does the Bureau have any plans to extend this type of program to other areas of the country?

Answer: The $200,000 provided in 1990 is being used to establish an Archaeological Resources Protection Unit under BLM's direction based in Albuquerque, New Mexico. Personnel actions and office arrangements are underway and the ARPA Unit is expected to be fully operational by mid-summer, 1990. The Unit will focus on implementing efforts with the cooperating federal agencies, establishing standards and operating procedures, and conducting investigations of artifact trafficking. Other work in progress also includes entering data on known looted sites into a law enforcement database called LAWNET. The Unit will monitor damage to these sites and update the site data so that criminal looting activity can be tracked.

The Archaeological Resources Protection Unit represents BLM's long-term commitment of personnel and resources to decrease the theft and destruction of archaeological resources. Investigative efforts typically require extensive groundwork, cooperation and long-term commitment before any results may be seen. It is too early to determine whether the establishment of other such enforcement units would be beneficial. We will consider expanding this approach after the ARPA Unit has had time to function and we can assess its effectiveness. We intend to expand the use of the LAWNET database to support archaeological resource investigations in other BLM State Offices in 1990 and 1991.

SUBCOMMITTEE RECESS

Senator REID. I thank you very much. The subcommittee will stand in recess subject to the call of the Chair.

[Whereupon, at 3:45 p.m., Tuesday, May 1, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

MONDAY, MAY 7, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room S-128, the Capitol, Hon. Robert C. Byrd, (chairman) presiding.

Present: Senators Byrd and Domenici.

DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

STATEMENT OF T S ARY, DIRECTOR

ACCOMPANIED BY:

- JAMES F. DONAHUE, CHIEF, DIVISION OF BUDGET
- JOHN D. MORGAN, JR., CHIEF STAFF OFFICER
- WALTER J. LANDER, ASSOCIATE DIRECTOR, FINANCE AND MANAGEMENT
- DAVID S. BROWN, ASSOCIATE DIRECTOR, INFORMATION AND ANALYSIS
- DAVID R. FORSHEY, ASSOCIATE DIRECTOR, RESEARCH
- ANTHONY L. ITTEILAG, DIRECTOR, OFFICE OF BUDGET, DEPARTMENT OF THE INTERIOR

BUDGET REQUEST

Chairman **BYRD**. The subcommittee will come to order. Today we will review the fiscal year 1991 budget request for the Bureau of Mines. Testifying in support of that request will be the Director, Mr. T S Ary.

Mr. Ary, we have your statement. You may read it if you like. We will insert it in the record in its entirety. If you want to present some of your associates, you may do that. Then we will have the questions.

Mr. **ARY**. Thank you, Mr. Chairman. I appreciate the opportunity to appear to talk about our budget, and our request is approximately $145.7 million, which is an increase of about $4.5 million over last year's President's budget, and it's approximately $39 million under the enacted budget.

INTRODUCTION OF ASSOCIATES

I have with me today Dr. John Morgan, Chief Staff Officer; Mr. Walter Lander, Associate Director, Finance and Management; Mr. Dave Brown, Associate Director, Information and Analysis; Dr. David Forshey, Associate Director, Research; Jim Donahue, Chief, Division of Budget; John Bennett who is in our I&A program, and also Mr. Itteilag from the Department.

One of our major priorities in this budget will be covering the Bureau's fixed costs. A major item in this category is relocation of the Bureau's headquarters. We expect this to occur in fiscal year 1991, and it will cost us about $2.9 million.

An additional $2.4 million is also estimated for rental payments to the General Services Administration at both our new and current headquarters location as well as other facilities which we lease nationwide.

We will also experience additional costs in fiscal year 1991 for such items as workers' compensation, the Federal employees retirement system, an additional workday, and various departmental programs in which we participate.

The major change in this budget is the deferral of an appropriation request to reimburse the Environmental Protection Agency Superfund for its costs in cleaning up property owned by the Robinson Brick Co. of Denver, CO, which is a part of the Denver radium Superfund site. This deferral, however, will not affect the pace of the cleanup efforts.

The Bureau's fiscal year 1991 budget continues to support research to enhance mineworker health and safety, reduce pollution, clean up the environmental impact of mining and mineral processing operations, and enhance accessibility and conservation of domestic mineral resources.

It also contains resources to carry out the Presidential and the Secretarial initiatives on education, voluntarism, women and minorities; to modernize and upgrade the collection, analysis, and information dissemination capabilities of the Bureau's mineral information and analysis program; also to expand the mineral land assessment activities; analyze regulations that adversely affect the domestic minerals industry and address the needs for minerals training and research at the Nation's universities. For the first time the Bureau's budget request includes funding for the Mineral Institute Program.

The 1991 budget request includes increases in human factors research in the Health, Safety and Mining Technology Program and in the Environmental Technology Program.

During fiscal year 1991 we will focus on the risks related to new or novel extraction technologies, haulage and transportation at surface operations, respirable dust, noise, mountain bumps, ventilation requirements, fires and explosions and maintaining escapeways during emergencies in underground coal mines.

Environmental technology research will emphasize biological techniques, such as constructed wetlands, to control acid mine drainage. We will continue our studies on subsidence, on abandoned mined land reclamation and on solution of hazardous waste problems associated with hard rock mining, mineral processing and recycling. This includes cyanide contamination and techniques for dealing with the Superfund sites.

Minerals and materials science research will stress technologies for extracting and recycling strategic and critical materials and technologies related to advanced materials.

The Geological Survey and the Bureau of Mines are responsible for assessing the mineral resources of the United States and investigating their economic development. It is Government policy to periodically and systematically inventory public lands and their resources and to protect their present and future use through a land use planning process. For this reason this budget includes $1.2 million to continue assessment of high priority roadless areas in Idaho.

Regulatory compliance costs affecting the U.S. mineral industry are expected to increase during the 1990's. The Bureau conducts timely analysis to inform Federal and State authorities about the impacts of proposed regulations and to support regulatory alternatives that are technically feasible and cost-effective.

The extensive minerals experience and expertise of the Bureau of Mines allows it to make a unique and valuable contribution to the regulatory decisionmaking process.

This is the first of a multiyear request in the waste management environmental sector. We are investigating the possibility of doing some work in this area this year. This is a very important area for the Bureau of Mines and for the entire mining, mineral, and manufacturing industry. We must find a way to balance the desires of maintaining a quality environment while at the same time maintaining the economic needs and requirements to allow continued development of our Nation's resources.

OPENING STATEMENT

The Bureau will continue its efforts to make this balance become a reality. The Bureau of Mines will increase their efforts in this sector in future years.

For the first time since its transfer to the Bureau of Mines in 1982, the administration recommends funds for the Mineral Institute Program in order to continue to utilize the expertise of these academic institutions to augment the Bureau of Mines' in-house research resources by funding the research grant component of the program, but not the allotment grants.

Research grant funding complements and supplements in-house research efforts on high priority mineral-related problems. This initiative also furthers the Secretary of Interior's interests in supporting education and supports a Presidential MBO in this area since the Mineral Institutes collectively represent the Nation's best source of future professional talent in the minerals field.

Proposed funding of the Mineral Institute Program will be awarded competitively, and it will also cover the Bureau's administrative expenses.

PREPARED STATEMENT

Although Congress prohibited the sale of the Bureau's helium program assets in 1990, the fiscal year 1991 budget assumes that steps leading to the phaseout of the helium operations will begin during fiscal year 1991 as part of the administration's effort to shift Government services to private providers.

Mr. Chairman, that concludes my prepared statement. We would be happy to answer questions that you or the other members of the committee might like to ask.

[The statement follows:]

STATEMENT OF T S ARY

Mr. Chairman, I appreciate the opportunity to appear before the subcommittee to discuss the Bureau of Mines fiscal year 1991 budget. Our Budget Request is $145,712,000, an increase of $4,515,000 over last years President's Budget.

The Bureau's FY 1991 budget continues to support research to enhance mine worker health and safety; reduce pollution and clean up the environmental impact of mining and mineral processing operations, and enhance the accessibility and conservation of domestic mineral resources. It also contains additional resources to carry out Presidential/Secretarial initiatives on education, volunteerism, and women and minorities; modernize and upgrade the collection, analysis and information dissemination capabilities of the Bureau's mineral information and analysis program; expand mineral land assessment activities; analyze regulations that adversely affect the domestic minerals industry; and address the needs for minerals training and research in the Nation's universities. For the first time, the Bureau's budget request includes funding for the Mineral Institute program.

The Bureau's research efforts will continue to provide the scientific knowledge needed to show the feasibility of innovative approaches and lay the groundwork for the development of specific applications by private industry. The Bureau's research request is the highest amount included in a President's budget since FY 1983, totaling $73,722,000, more than half of our total request, and represents an increase of $1,387,000 above the amount included in the FY 1990 President's budget.

The request includes increases in human factors research in the Health, Safety and Mining Technology program and in the Environmental Technology program. During FY 1991, Health, Safety and Mining Technology research will focus on the risks related to new or novel extraction technologies; haulage and transportation at surface operations; and respirable dust, noise, mountain bumps, ventilation requirements, fires and explosions, and maintaining escapeways during emergencies in underground coal mines. Environmental Technology research will emphasize biological techniques, such as constructed wetlands, to control acid mine drainage; subsidence, abandoned mined land reclamation, and solution of hazardous waste problems associated with hard rock mining, minerals processing and recycling, including cyanide contamination and techniques for dealing with Superfund sites. Minerals and Materials Science research will stress technologies for extracting and recycling strategic and critical minerals and technologies related to advanced materials.

The Bureau's wetlands research supports the President's goal of no net loss of wetlands. Over 300 artificial wetlands using technology developed by the Bureau have been constructed by the mining industry to control and mitigate acid mine drainage. These wetlands have the potential to make significant improvements in water quality.

The FY 1991 budget includes five proposed initiatives:

- Stewardship
- Information Function Upgrade
- Mineral Land Assessments
- Regulatory Issues
- Mineral Institutes

Of these, the Mineral Land Assessments and Regulatory Issues initiatives are continuations and expansions of our earlier initiatives with the same titles. The FY 1990 Alaskan Strategic and Critical Minerals initiative is an integral part of the Mineral Land Assessments initiative proposed for this year. In addition, initiatives from prior years on Advanced Materials, Innovative Mining and Processing Technology, or Robotics and Automation, have been incorporated into the Bureau's ongoing base program at what we believe is an appropriate level of effort.

STEWARDSHIP

The Bureau's work in support of the President's and Secretary's departmentwide emphasis on stewardship of the Nation's resources focuses on: Excellence in Education; Women and Minorities; and Take Pride in America.

The Bureau of Mines supports the President's goal of raising the standard of education in America. In addition to the request for research funds for the Mineral Institute program, an increase of $500,000 over the base is being proposed to oversee the development of a minerals education curriculum for elementary schools.

The Bureau of Mines supports Interior's goal to involve women and minorities as employees, especially at management levels, as participants in an effort to reach beyond minimum equal opportunity requirements. We are requesting an increase of $300,000 over the base to establish a program patterned on the Geological Survey's Minority Participation in the Earth Sciences Program.

The Bureau of Mines encourages volunteer stewardship in a variety of ways, including the Department's national Take Pride in America campaign. Take Pride reaches out to millions of Americans through its national awards program, grassroots activities, and public service announcements. For the Bureau of Mines, an increase of $100,000 over the base is proposed to continue and expand its active support of this initiative.

INFORMATION FUNCTION UPGRADE

To meet the evolving needs of its constituents--the users of mineral data and analyses both in government and the private sector, the Bureau of Mines proposes to significantly enhance and automate its ability to perform this central mission--gathering, analyzing and distributing information about minerals. This effort includes establishing a new centralized statistical function, augmenting data and information collection capabilities, redesigning and broadening its periodic publications, and developing an efficient supporting infrastructure.

The Bureau upgraded its statistical function by establishing a statistics division during FY 1990. The new organization is introducing modernized survey techniques, upgrading statistical standards, improving processing and timeliness, and upgrading the quality of the Bureau's statistical publications.

The second major thrust of this initiative will be to develop new data and information systems. A new data base for advanced materials will be added to existing data systems to support future analysis and information activities, as well as Bureau research, into advanced materials.

The third major thrust of this initiative concerns the modernization of the Bureau's mineral information publications to improve their readability, appearance and timeliness. We are requesting a program increase of $3 million for these efforts.

MINERAL LAND ASSESSMENTS

The Geological Survey and the Bureau of Mines are responsible for assessing the mineral resources of the United States and investigating their economic development. It is government policy to periodically and systematically inventory public lands and their resources, and to project their present and future use through a land-use planning process. For this reason, this budget includes $1.2 million to continue assessment of high priority roadless areas in Idaho.

Alaska has the highest potential for undiscovered strategic and critical mineral deposits in North America. The Alaska Strategic and Critical Minerals Initiative will locate and assess the resource development potential of strategic and critical minerals on public lands in Alaska, and develop the information needed to stimulate the private sector to initiate activity leading to production. The initiative will provide timely, comprehensive mineral data required by Federal and State agencies to make well-informed economic and policy decisions, and encourage industry involvement in the exploration for and development of strategic and critical minerals in Alaska. The initiative will also provide data for mine feasibility, including mineral characterization and beneficiation studies, and it will include developing exploration models and identifying target areas for economic deposits. We are requesting a program increase of $800,000 for these efforts in Alaska.

REGULATORY ISSUES

Regulatory compliance costs affecting the U.S. mineral industry are expected to increase in the early 1990s. The Bureau conducts timely analyses to inform Federal and State authorities about the impacts of proposed regulations, and to support regulatory alternatives that are technically feasible and cost effective. The extensive minerals experience and expertise of the Bureau of Mines allows it to make a unique and valuable contribution to the regulatory decisionmaking process. We are requesting a program increase of $200,000 for these efforts.

MINERAL INSTITUTES

For the first time since its transfer to the Bureau of Mines in 1982, the Administration recommends funds for the Mineral Institute program in order to continue to utilize the expertise of these academic institutions to augment the Bureau of Mines in-house research resources by funding the research grant component of the program, but not the allotment grants. Research grant funding complements and supplements in-house research efforts on high priority mineral-related problems. This initiative also furthers the Secretary of the Interior's interest in supporting education, and supports a Presidential MBO in this area, since the Mineral Institutes collectively represent the Nation's best sources of future professional talent in the minerals field. Proposed funding for the Mineral Institute program consists of $4,000,000 for research grants, to be awarded competitively, and $250,000 to cover the Bureau's administrative expenses.

One of our major priorities in this budget had to be covering the Bureau's fixed costs. A major item in this category is the relocation of the Bureau's headquarters. We expect this to occur during FY 1991, and it will cost us $2.9 million. An additional $2.4 million is also estimated for rental payments to the General Services Administration at both our new and current headquarters locations, as well as the other facilities which we lease nationwide. We will also experience additional costs in FY 1991 for such items as workers compensation, the Federal Employee Retirement System, an additional workday in 1991, and various departmental programs in which we participate.

A major change in this budget is the deferral of an appropriation request to reimburse the Environmental Protection Agency's Superfund for its costs in cleaning up property owned by the Robinson Brick Company (ROBCO) of Denver, Colorado, part of the Denver Radium Superfund site. The radioactive wastes on this property were generated over 70 years ago by the National Radium Institute (a private organization) on the ROBCO property. The Congress has appropriated $11,500,000 through FY 1990 to fund this clean up, and EPA has made substantial progress in excavating the contaminated soil, locating a disposal facility, and arranging for shipment of the contaminated soil to the site. Since the Bureau's share of the clean up costs has not been finally determined, the Administration has decided not to make a request for additional funding for this purpose in FY 1991, but to wait until the final cost is determined before requesting appropriations to reimburse the Superfund. Fiscal Year 1993 estimate includes $14 million for ROBCO clean up, the current estimate of clean up costs. This will not affect the pace of the clean up efforts.

Although the Congress prohibited the sale of the Bureau's Helium program assets in FY 1990, the FY 1991 Budget assumes that steps leading to the sale of the Helium Operations will begin during fiscal year 1991 as part of the Administration's effort to shift government services to private providers.

Mr. Chairman, that concludes my prepared statement. I would be happy to answer any questions that you or the other members of your committee would care to ask.

BIOGRAPHY OF WALTER J. LANDER

Walter Lander graduated from the Wharton School with a MBA in foreign commerce in 1951. His masters thesis was written on the international diamond cartel. He graduated from the Georgetown University Law Center in 1961 with a juris doctor degree and was admitted to the Virginia bar.

He went to work for the Department of the Army in 1951 working successively for the Adjutant General, the Corps of Engineers, the Military District of Washington, the Ordnance Corps and the Signal Corps in various administrative capacities. In 1963, he transferred to the program and budget office of the Federal Aviation Agency and remained there until 1967 when he transferred to the Bureau of Mines. After having served in a number of capacities in the Bureau, he was reassigned as the Associate Director--Finance and Management.

RESEARCH REDUCTIONS

Chairman **Byrd**. The Bureau of Mines fiscal year 1991 budget proposes to reduce research funding by eliminating most of the congressional add-ons for the current year. The administration is proposing to reduce the Bureau's research program by $21.5 million or 23 percent.

What funding level did you request from the Department for research?

Mr. **Ary**. We requested a total of $98 million.

Chairman **Byrd**. I'm talking about from the Department.

Mr. **Ary**. We sent to the Secretary $98 million, and the Secretary sent back to us the $98 million which was sent to OMB.

Chairman **Byrd**. So you requested $98 million of OMB for research?

Mr. **Ary**. Yes, sir.

Chairman **Byrd**. And you had requested initially $98 million?

Mr. **Ary**. $98 million, yes, sir.

Chairman **Byrd**. You are proposing to reduce your research FTE's by 114 FTE's from the fiscal year 1990 level of 1,250. That is getting close to a 10-percent reduction. How do you propose to accomplish those reductions? Would reductions in force be necessary?

Mr. **Ary**. Yes, sir; if we reduce that many, we would need a reduction in force.

Chairman **Byrd**. How much of the proposed reductions in funding and staffing would be at the Washington, DC, office and how much in the field?

Mr. **Ary**. The majority of it would be in the field, but I would think that our Washington office would also be reduced proportionately because they are the ones who will supervise the field activities on the research side.

Chairman **Byrd**. How can you manage your research program with such significant reductions?

Mr. **Ary**. If the budget we requested is the budget that is enacted, then we will have adequate people to serve that budget with the reduction in the FTE's.

Chairman **Byrd**. In other words, if the budget that you requested is enacted, you're going to be forced to reduce the staffing?

Mr. **Ary**. Yes, sir.

Chairman **Byrd**. Please provide for the record a list by research center, headquarters and so on which the proposed funding and staffing reductions would occur.

Mr. **Ary**. We will, sir.

[The information follows:]

Research Reductions

The proposed budget reductions would have the following impact on funding and FTE's:

RESEARCH CENTERS FUNDING AND STAFF REDUCTIONS

Location	Decreased funding	FTE impact
Albany, OR	$300,000	4
Denver, CO	1,200,000	13

RESEARCH CENTERS FUNDING AND STAFF REDUCTIONS—Continued

Location	Decreased funding	FTE impact
Pittsburgh, PA	5,563,000	44
Reno, WV	230,000	3
Rolla, MO		
Salt Lake City, UT	164,000	3
Spokane, WA	918,000	11
Tuscaloosa, AL	94,000	1
Twin Cities, MN	2,329,000	25
Headquarters, DC (contracts)	12,160,000	4
Total	22,958,000	108

FTE INCREMENTAL COSTS

Chairman **Byrd**. Supply for the record the incremental costs to maintain all 114 FTE's.

Mr. **Ary**. Yes, sir; we will.

[The information follows:]

Cost of Restoring FTE Reductions

The incremental salary and benefit costs of maintaining the 114 Research FTE which were reduced in the President's Budget would be $4,982,430, based on actual Research costs per FTE in fiscal year 1989 and expected cost increases through FTE 1991. Personnel support costs (travel, transportation, supplies, materials, and equipment) would add another $1,054,500, for a total of $6,036,930.

RESEARCH REDUCTIONS

Chairman **Byrd**. How can your managers and employees plan ongoing projects with the proposed reductions looming on the horizon?

Mr. **Ary**. Mr. Chairman, it's very difficult to do any planning when you have a proposed variance in your programs year-to-year, and we have ongoing programs which we know what the people requirement is, the FTE requirement is going to be, but it's very difficult both from a manager's standpoint as well as from a investigator's standpoint to have the balancing of the program requirements from year-to-year. We have tried to look at a longer-range program. We set up a 5-year program, and we are looking at it, but with the budgeting on a year-to-year basis, it's very difficult in a research program, or any program.

Chairman **Byrd**. You requested $98 million, and, yet, the budget request is $73.7 million.

Mr. **Ary**. Yes, sir.

Chairman **Byrd**. A decrease of $21.5 million. That would have a pretty adverse effect on the morale of the personnel, wouldn't it?

Mr. **Ary**. Yes, sir; it does.

Chairman **Byrd**. And of course your ability to attract new employees would be greatly impaired.

Mr. **Ary**. When you have a reduction of that amount, the word gets around the research centers and gets around the industry very rapidly, and it would be very difficult to entice young people to come in. It's hard enough the way it is because there are so few good people available, but they would not be interested in coming into an organization that is going to take that kind of a cut each year.

Chairman BYRD. The bulk of the reduction in the research activity is derived from a decrease in the health, safety, and mining technology account, a decrease of $16.1 million, which would be 30 percent below the fiscal year 1990 appropriated level of $54.3 million. What is the rationale for this large reduction in the health, safety and mining technology research function?

Mr. ARY. We carry in our base what we feel is a balanced amount for the health, safety, and mining technology program. When we review the various budget requests that come in, we try to utilize the prioritizing of those items, and as a result sometimes they do not make it. We all have different priorities as to what programs make it through the budget process and what does not.

Chairman BYRD. What was the balanced amount in your base for health, safety, and mining research?

Mr. ARY. The Bureau asked the Department for $49.1 million, and when we got finished reviewing it with the Department, the Department had approved that $51.7 million go forward to OMB.

Chairman BYRD. You mean the Department approved more than the Bureau asked?

Mr. ARY. Yes; they did. What happened is we were trying to debate about $1½ million, whether it should be under minerals and science or whether it should be in the health, safety, and mining technology. It was a matter of classification, and we put it over into the health, safety, and technology side of it.

A lot of our health and safety is difficult for us to say it's either health and safety or it's mining methods or mining equipment, and this particular one we moved back over into the health, safety, and mining technology side. We had a couple of items like the Casa Grande copper demonstration project, which was a large item.

That was in mining technology, and some of us thought that maybe it should go in the environmental side or into the mineral and materials side, but it came back into the mining technology because it is one of the advanced mining systems. It's that type of working back and forth that we went through, and that's why the Department approved more than we had requested in that area.

Chairman BYRD. The fiscal year 1990 appropriated level was $54.3 million. As I understand it, the funding level that was requested by the Department to OMB was $51.7 million.

Mr. ARY. Yes, sir.

RESEARCH REDUCTIONS

Chairman BYRD. And that has been reduced by $16.1 million or 30 percent.

Mr. ARY. Yes, sir.

Chairman BYRD. Which leaves a budget request of how much? How much is the budget request?

Mr. ARY. The budget request is $38.2 million.

MINING INJURIES AND FATALITIES

Chairman **Byrd**. On page 96 of your budget justification you point that fatal injuries at surface mines have remained nearly constant, averaging 47 deaths each year during the last 6 years. The total injuries have increased by 82 percent, rising from 5,363 in 1983 to 9,775 in 1988.

Will you submit the statistics for the record going back over the past 10 years as to the fatalities and injuries in coal mines and provide a breakdown by State, if you will, and the type of injury.

Mr. **Ary**. I have this available if you would like to take a quick look at it.

Chairman **Byrd**. Is that for the last 10 years?

Mr. **Ary**. This runs from October 1989, and this sheet shows from 1969 to 1989. Although we all say that the accident and fatality rate is leveling out, when you see it on this larger chart, it certainly does look like it here, but when you break that down and you put it on a scale where you can actually see it, each one of these spikes represents a major mine fatality or a major mine disaster. So the line is going down, but you can see these movements. We will supply this for the record, and we do have a State-by-State injury record also.

Chairman **Byrd**. All right, if you would supply that for the record.

[The information follows:]

COAL MINING FATALITY RECORD

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 [1]
Alabama	10	3	4	6	2	4	4	3	2	1	2
Alaska											
Arizona				1	1			1		1	2
Colorado	1	2	21	3	1	2		2	2	1	1
Georgia											
Illinois	6	15		7	4	5	2	8	1	1	3
Indiana	2	3	1			4			1	1	2
Iowa						1					
Kansas											
Kentucky	36	29	41	46	14	39	18	16	30	15	30
Louisiana											1
Maryland	2					1					1
Missouri			2		1						
Montana									2		
New Mexico	1	1					1	3			
North Dakota								1			
Ohio	3	8	3	2	2	3		3	2	3	2
Oklahoma	2							1		1	
Pennsylvania	14	17	16	3	13	8	13	10	6	4	4
Tennessee	5	4	15	1	3	1	1	2	3	2	1
Texas	1						2	3		1	
Utah	6		3	10	3	29	2	3		3	1
Virginia	17	15	17	19	13	13	8	12	3	5	9
Washington								1			
West Virginia	36	34	27	22	13	16	16	18	11	12	8
Wyoming	2	2	3	2						1	
Total	144	133	153	122	70	126	67	87	63	52	67

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[1] January to December 1989 preliminary.

COAL MINING INJURY RECORD

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 [1]
Alabama	963	998	648	874	694	718	712	686	720	710	631
Alaska	23	8	15	16	11	15	4	6	4	6	4
Arizona	24	13	20	19	34	44	51	23	20	18	16
Arkansas	5	4	10	17	1	1		3		1	
Colorado	453	611	565	359	251	277	309	262	204	296	292
Georgia					2						
Illinois	1,982	1,1651	1,581	1,758	1,420	1,545	1,698	1,410	2,015	2,009	1,868
Indiana	311	185	151	184	193	315	237	211	249	230	219
Iowa	2	3	8	1	8	15	6	5	31	12	5
Kansas	20	26	17	13	6	5	4	5	2	1	7
Kentucky	2,868	2,536	2,377	2,357	1,743	1,796	1,765	2,327	3,191	2,844	2,926
Louisiana							6	3	6	9	18
Maryland	42	54	92	70	39	40	31	21	99	138	129
Missouri	103	64	56	59	46	63	52	68	66	53	35
Montana	67	87	44	39	40	37	45	37	41	64	78
New Mexico	62	44	41	49	49	76	97	91	135	93	95
North Dakota	49	64	41	39	34	41	48	46	49	53	55
Ohio	1,833	1,824	1,472	1,249	569	989	817	854	804	739	644
Oklahoma	73	69	58	35	31	32	43	57	60	53	50
Pennsylvania	4,819	4,302	3,318	2,841	2,216	2,211	1,769	1,968	2,763	2,682	2,266
Tennessee	209	195	165	190	105	66	75	96	215	186	185
Texas	86	187	147	81	114	143	175	340	345	271	296
Utah	479	697	620	752	313	242	351	281	296	359	369
Virginia	1,775	2,216	1,815	1,419	1,021	1,065	904	1,075	1,507	1,902	1,670
Washington	68	64	40	55	44	33	54	90	77	77	78
West Virginia	6,870	6,252	4,933	4,585	2,885	2,774	2,078	1,974	3,337	3,479	2,217
Wyoming	315	397	355	216	178	173	215	200	255	242	218
Total	23,490	22,543	18,623	17,340	12,059	12,793	11,582	12,155	16,491	16,527	15,371

[1] January to December 1989 preliminary.

HEALTH, SAFETY, AND MINING TECHNOLOGY

Chairman BYRD. Don't the statistics suggest that there should be an increase in the Health, Safety, and Mining Technology Program rather than the proposed 30-percent decrease?

Mr. ARY. I think any time you have a decrease in funding for health and safety it's not good. In order to try to reach a target zero for lost time, accidents or fatalities it's something you have to stay with and stay on.

Here again, we tried as hard as we could to try to balance out our program so that we could continue with a good health and safety program. We probably have done as much work as we thought we could do in working with the various people in technology transfer or working with safety training, and that's true. We did establish a budget for it and there is always room for improvement on that.

We have the same type of problems with OMB that others do in that they have to deal with the mining accidents as well as the farm accidents. For the first time in years the agricultural industry passed the mining industry as being the most dangerous. So as a result I think we all have got a long way to come to try to continue to see that that reduction in fatalities and accidents continues to go down.

Chairman BYRD. What is the most hazardous occupation in the United States?

Mr. ARY. Actually it's agriculture right now. As of about, oh, I think about October of last year they have passed the mining industry. The mining industry is second. It has been the leader for years, with coal mining being the most dangerous of the mining industry.

Chairman BYRD. What about fisheries, the fisheries industry, fishing?

Mr. ARY. I think that the fishing side of it and any type of offshore activity is dangerous because of the elements that are involved, the weather, et cetera.

Chairman BYRD. How does that rank with coal mining?

Mr. ARY. I think it's below coal mining. Fisheries is below coal mining.

Chairman BYRD. Speaking of fisheries, it reminds me of a quotation from Hamlet: "A man may fish with the worm that hath eat of a king, and eat of the fish that hath fed of that worm." You figure that out. [Laughter.]

Mr. ARY. It goes round-robin. Actually on the agricultural side the article that carried the story that it had surpassed the mining, it was quite a surprise because there had been several magazine articles since also, but in that particular article it indicated that the Federal Government spent about 34 cents per person, per farmer in the farming industry or in the agricultural industry, but spent $241 per miner, and you can see from that chart how it has brought the accident rate down. But in the agricultural side it's still going up. In fact, they have a higher fatality rate per capita than the mining industry does at this point, the costs from turning over tractors and the lack of training because the dad gets these children out and teaches them to run the tractor and lets them go.

Chairman **Byrd**. Well, don't you think we ought to be concentrating on reducing the average annual number of mining fatalities from 47 down to zero?

Mr. **Ary**. Yes; we should. We should have a target of zero. Some people say you will never make it, but if we don't have, we will never try to get there. It should be a constant activity of all of us. Safety is an attitude. It's a concept you've got to think safety in everything you do, family right on down into the working place.

MINING SYSTEMS

Chairman **Byrd**. Your justification states that technology must be made available that will improve conventional mining systems and operations and reduce or eliminate any inherent hazards.

What actions would the Bureau undertake in fiscal year 1991 to reduce the number of deaths and injuries?

Mr. **Ary**. We have a program that is a human factors program which we have been working with the unions and associations and the manufacturers in which we are trying to look at the type of equipment and changes in the equipment to make it a safer piece of equipment, but also to have it in a configuration that the fatigue, the mental and the physical fatigue of the miners will not be as bad as it has been so that they will always be in an alert condition as they are working.

We have also done some work and are continuing to do work on automation in which we are using remote control panels to operate pieces of equipment to move the miner into a safe haven so that he is able to see the equipment, but he is not out exposed into the open area.

We have done quite a bit of design work on sensors to tell us when we have bad ground, when the ground is working and when we might end up having problems and when we might have a rock fall.

The new sensors that are out and the studies that are going on have given us about a 60-percent predictability of rock bursts in some areas in the hard rock mines. In our coal mines we are still doing a lot of work on mountain bumps to try to make a prediction on those.

Those are some of the things we are doing, and we have very aggressive programs. As a matter of fact in these technologies we are looking at in-situ mining where we are actually worrying about the environmental aspects as well as keeping the miner in this particular case outside of the underground. We are not going underground. We have a different type of operation.

Chairman **Byrd**. Your overall reduction in research is 23 percent, and yet your reduction in health, safety, and mining technology is 30 percent. Won't the 30-percent reduction in this program hamper the Bureau's abilities to improve mining systems and operations and to reduce or eliminate inherent hazards?

Mr. **Ary**. Yes; it will in that there is a reduction, but it does not prohibit us from continuing with funds that we have left because we still have an aggressive research program for the innovative technologies as well as many of them are tied into our safety program as I explained a little earlier.

Chairman **BYRD**. Well, it won't prohibit you from continuing with the funds you have left, to use your words. That should go without saying. But it will hamper and impair the Bureau's abilities to improve the systems and operations and to reduce or eliminate inherent hazards, will it not?

Mr. **ARY**. Yes, sir; when you reduce the funds, you certainly hamper and you do impair your program. You slow it down.

OCCUPATIONAL HEALTH

Chairman **BYRD**. On page 84 of your budget justification with respect to occupational health, it is stated:

> Respirable particles represent one of the most serious health hazards because they can be inhaled and deposited deep in the lungs over long periods. Often the older, more experienced and productive miners will be removed prematurely from the work force due to respiratory illness.

Now again quoting from your justification:

> In many cases, noise levels in underground and surface mining operations are now so high that many mining and processing operators can meet Federal standards only by reducing the worker's exposure time. Such reductions often involve production losses.

These are serious reductions. How can the administration turn its back on these concerns by proposing to reduce occupational health research by $4.5 million, which is a 54-percent decrease from the fiscal year 1990 appropriated level?

Mr. **ARY**. Here again, I think that different parts of the administration have different priorities that they set. We are carrying in our base some $5 or $6 million that we're utilizing for research in respirable dust and dust emissions underground. And in our noise work we have an ongoing program there. Again the reduction causes a delay, and it does cause for a slowdown of the operations.

In our diesel work we still have funds available that we're working on there to try to reduce the emissions and to try to prepare and design a diesel that we can use underground. But, as you said, the reduction of the funds will certainly hamper this activity. I think we asked for about $6 million or something in that range for occupational health programs, and we ended up with a budget of $3.8 million, and it's just in that one area.

Chairman **BYRD**. So how much did you request at the OMB level?

Mr. **ARY**. It was $8.6 million for occupational health. Now, in addition to that, we had—well, I guess I'll leave it there because of the advanced mining systems which includes some of the safety aspects also, but we do not have that broken out. I was looking for the noise side of it. As I remembered, we had about $800,000 last year, and I think this year in our budget we have about $341,000, but I don't have the specifics to break out on that.

Mr. Donahue explains that some of this is in our Mineral Institute Program, but I was looking specifically and trying to find the noise control. We are carrying $341,000 in our noise control program, and $1.1 million on the diesel side.

Chairman **BYRD**. Well, let's concentrate on the occupational health research. Your request was $8.6 million at the OBM level?

Mr. **ARY**. Yes, sir.

Chairman Byrd. What was the request at the departmental level? What did the Bureau ask for at the departmental level?

Mr. Ary. We had $6 million.

Chairman Byrd. The Bureau asked for $6 million?

Mr. Ary. Yes, sir.

Chairman Byrd. And the Department went forward to OMB with an increase making it $8.6 million?

Mr. Ary. Yes, sir; the Department increased it by some of the add-ons that had been made the year before.

Chairman Byrd. In order to achieve this decrease in occupational health research you are planning to eliminate the Generic Mineral Technology Center for Respirable Dust. Is that accurate?

Mr. Ary. Yes, sir; we did not budget specifically for the Generic Center, but they will be able to compete for the Mineral Institute Research Grants.

RESPIRABLE DUST

Chairman Byrd. The National Center for Respirable Dust, which is headquartered at West Virginia University, has become internationally recognized for its leadership in researching the causes of respirable dust disease, pneumoconiosis. The Center is, I believe, the sole source of research of possible treatments to protect against and possibly reverse the effects of this dreadful disease. Is that accurate?

Mr. Ary. Yes, sir.

Chairman Byrd. Is it possible to reverse the effects of pneumoconiosis?

Mr. Ary. To the best of my knowledge, no.

Chairman Byrd. What level of funding would you need to continue this program?

Mr. Ary. It had been $2.5 million in years past.

Chairman Byrd. $2.5 million?

Mr. Ary. Yes, sir; as I said earlier, this is the first year that the Department has approved budgeting for Mineral Institutes on the Generic Center side. We did not include this separately from the Generic Centers Mineral Institute Program. But what we are trying to do is utilize and convince the Department and OMB that these are worthy projects, that the universities are the areas that we can get trained people. We are getting good research from them.

The Generic Center side is a competitive arrangement whereby the universities bring in programs and they are judged by their peers and granted. We are trying to move this over into an annual approval by the Department and OMB for these. However, we did not include the $2.5 million specifically for the respirable dust GMTC. However, it is in the Mineral Institute Programs. This was on the $4 million competitive side.

Chairman Byrd. Are you saying this National Center for Respirable Dust is somewhere else in the budget?

Mr. Ary. It's in the Mineral Institute budget.

Chairman Byrd. How much is in there for it?

Mr. Ary. We have $4 million total in there and it's competitive. The programs are submitted and judged by the various people that are involved in the programs and granted, and we don't know that until after the advisory committees have met.

Chairman BYRD. Is that where it has been in the past?

Mr. ARY. It has always really been there, but it has been an add-on, and we carry it under the occupational health side when it's an add-on.

Chairman BYRD. That was a congressional add-on?

Mr. ARY. Yes, sir.

Chairman BYRD. And that amount is how much?

Mr. ARY. $2.5 million in 1990.

Chairman BYRD. Would that continue to fund it at its present personnel level and so on?

Mr. ARY. Yes, sir.

Chairman BYRD. That wouldn't be including inflation, would it, the $2.5 million?

Mr. ARY. No.

Chairman BYRD. So what would you need to continue?

Mr. ARY. I can't tell you. I think that probably what we would have to do is go to the Center and ask them what their factors are they are using for inflation.

Chairman BYRD. Let the subcommittee know.

Mr. ARY. Yes, sir.

[The information follows:]

INFLATION FACTOR AT NATIONAL CENTER FOR RESPIRABLE DUST

The inflation factor which would be used at the National Center for Respirable Dust would be 4 percent. This is the deflator prescribed by the Office of Management and Budget for nondefense items. This amount is not included in the $2.5 million.

ADVANCED MINING SYSTEMS

Chairman BYRD. I believe this gentleman wants to testify, doesn't he? [Indicating Mr. Donahue.]

Mr. ARY. I think he is trying to keep me on the straight and narrow here. He has been with me a couple of times when I fell off of the trail and I should not have. [Laughter.]

Chairman BYRD. The Bureau of Mines is requesting $13 million for advanced mining systems research. This is a reduction of $6.7 million or 34 percent from the fiscal year 1990 enacted appropriation of $19.8 million. This is a critical item in your total research program. These dollars are used to improve mining efficiency, to conserve minerals, to develop domestic supplies of critical metals and to protect the health and safety of miners.

Is there any basis for this 34-percent reduction other than budget stringency?

Mr. ARY. The biggest item in there is the Casa Grande in-situ mining demonstration in which there was a $5 million program. We felt that we were far enough along on the program that the industry could carry it. The basic work is done. It is a demonstration project, and it is going forward very well. So we did not budget money for it this year. There was a $5 million add-on last year, and the industry has moved in and has taken it over. That's one of the big cutbacks in that particular area.

Chairman BYRD. Industry has taken it over?

Mr. **Ary**. Yes, sir; well, they are operating and putting the money into it, and I'm sure that it's still an add-on and is going to require work from them. But we did not feel that our role was such that we needed to budget for it this year.

Chairman **Byrd**. How much industry support are you getting for it?

Mr. **Ary**. It's 25 percent by industry.

Chairman **Byrd**. The industry is putting in 25 percent?

Mr. **Ary**. Yes, sir.

Chairman **Byrd**. Is that in addition to the $5 million?

Mr. **Ary**. Yes; it is.

Chairman **Byrd**. Has the Bureau completed the automation and robotics projects for underground coal mines which we discussed last year?

Mr. **Ary**. No, sir; we haven't. We still have an ongoing program there, and I think it's going to be some time before we complete that because this is some long-term, high-risk type of research.

Chairman **Byrd**. What is the status of your projects?

Mr. **Ary**. We have developed some sensors and are utilizing some sensors. We have ongoing programs at Carnegie Mellon University in which we are actually moving pieces of equipment around. I would say that we are a third of the way through the program to completion.

Chairman **Byrd**. Provide for the record a list of the automation and robotic research projects along with their fiscal year 1990 and fiscal year 1991 budget.

Mr. **Ary**. Yes, sir; we will.

Chairman **Byrd**. And indicate for each project how it will suffer under the fiscal year 1991 request.

Mr. **Ary**. Yes, sir.

[The information follows:]

ADVANCED MINING SYSTEMS

[Projects related to automation/robotics technologies]

Project title	Fiscal year—		Impact of reduction
	1990	1991	
Autonomous navigation in mining	910	910	No reduction.
Equipment diagnostics	400	400	Do.
Fundamental investigations of robotics	440	440	Do.
Advanced sensor and control technology	880	799	Slight delay.
Haulage systems for autonomous mining	300	300	No reduction.
Longwall automatic steering system	200	200	Do.
Adaptive learning networks	400	400	Do.
Coal interface detector	540	545	Do.
Radar coal thickness sensor	270	275	Do.
Face ventilation technical autonomous mining	250	250	Do.
Retreat mining support system	50		Completed [1]
Automated highwall mining system	300		Add-on [2]
Radar coal thickness sensor	200	150	Add-on [3]
NIST control architecture	200	200	No reduction.
West Virginia University flexible automation	150	150	Do.
Carnegie Mellon University robotics research	200	200	Do.
DOE innovative concepts	35		Completed.

ADVANCED MINING SYSTEMS—Continued

[Projects related to automation/robotics technologies]

Project title	Fiscal year—		Impact of reduction
	1990	1991	
Autonomous roof support subsystems		250	Increase.
Total	5,725	5,469	

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[1] This project was jointly funded with Mine Safety Systems element and the Advanced Mining Systems portion will be completed in fiscal year 1990.

[2] This project was the result of a congressional add-on in fiscal year 1990. Efforts on the Edna Miner will be discontinued.

[3] This project was funded with fiscal year 1990 congressional add-on funding and will be reduced in fiscal year 1991. Completion of the contract effort will be delayed.

MINE SAFETY SYSTEMS

Chairman **Byrd**. On mine safety systems research, this program is requested at a level which is $511,000 below the fiscal year 1990 enacted level of $5 million. This is a 10-percent cut. What research are you proposing to eliminate in this area?

Mr. **Ary**. I'm looking at it. It took a while, but we found it. What it is is a reduction in the program on the haulage and materials handling system that is underground. We have been doing some work to try to find how we can automate the haulage equipment, and it would reduce that as well as $100,000 in the super long-wall program that we had.

Chairman **Byrd**. Have you accomplished what you set out to do?

Mr. **Ary**. No, sir; we have not. With the budget reduction, we would defer that and carry it forward at some future point in time.

Chairman **Byrd**. Which research projects are being terminated prior to the completion of their research objective? Why don't you list these for the record. Will you do that?

Mr. **Ary**. All right, yes, sir.

[The information follows:]

Research projects to be terminated

HEALTH, SAFETY AND MINING TECHNOLOGY

	Fiscal year 1990 add-on funding
Advanced mining systems:	
Heap, Stope and Insitu Lixiviants	$230,000
In situ copper mining experiment support	500,000
In situ copper mining experiment	5,000,000
Automated highwall mining system	300,000
Occupational health:	
Undiluted diesel exhaust emissions	75,000
Impact noise sources in mining	300,000
Auxiliary fan noise cancellation	120,000
Respirable Dust Generic Center [1]	2,500,000
Mine disaster prevention:	
Factors influencing methane emissions—MNM	90,000
Longwall gob gas control	175,000
Microbial conversion of methane	110,000
Methane control strategies—longwall	125,000

MINERALS AND MATERIALS SCIENCE

Minerals research:	
Metal-gas reactions in thermal plasmas	246,809
Oregon initiative—recycling	300,000
Oregon initiative	690,732

Materials research:	
Inorganic polymer structural composites	150,000
Substitute catalysts for platinum	300,000
ENVIRONMENTAL TECHNOLOGY	
Control of acid mine drainage and liquid waste:	
Biotreatment of coal mine drainage	252,000
University of Idaho—wastewater treatment	493,000
Agglomeration of backfill material	99,000
Solid waste management and subsidence: Soil Conservation Service—Arkansas revegetation	296,000
National Mine Land Reclamation Center: WVU/PSU/SIU/University of North Dakota	1,500,000
Total	13,852,541

[1] Would be eligible to compete for Mineral Institute research grants.

RESEARCH REDUCTIONS

Chairman BYRD. How does industry feel about the need for Bureau funding of these research projects? Does it agree that there will no longer be a need for the funding of those projects that you're going to list beyond fiscal year 1990.

Mr. ARY. No, sir; the industry feels just the opposite. I think when I visit with industry, they reflect your position on this, that we should be doing more. They sometimes feel that some of the work we are doing is too long-term and too high-risk and that we quit too soon. A lot of our activities they feel are good, but it's just too risky for them to enter into it when we pull out.

Chairman BYRD. You kind of agree with that, too, don't you?

Mr. ARY. Yes, sir; I do, very much so. We have looked at our technology transfer program, and we are finding that we have a lot of good programs to sell, and we just haven't carried it quite far enough along to get industry excited.

Those that we have been able to carry along, industry has snapped them up, and the self-rescuer is a good example. That was something we felt we ought to really put a lot of effort into, and we got it over to the point where industry bought into it right away, took it off our hands, and it's on the market.

We are trying and have been talking with OMB and with the Department on allowing us to carry some of our program just a little further, so that we can get industry to come in with us. We have a couple of programs in which they are coming in to cost share, and when they start doing that and start putting their money into the cost sharing side of it, then we know that that's the way to go.

So as a result, we are not carrying some of these along, and I do feel strongly that this is something we've got to sell, and we are trying to sell it. So far we've had pretty good luck. We've only tried on a couple of projects, but we have been able to get them to buy off on that, and I will continue personally to try to see to it that we can do that.

MINE DISASTER PREVENTION

Chairman BYRD. You propose to cut the mine disaster prevention research funding by 34 percent, $2.4 million from last year's level of $7.1 million. This is a pattern similar to prior year's budgets. Last year you said that mine disasters from 1990 through 2000 could cost the mining industry as much as $1.2 billion. This seems to be incongruent. Are you reaching your goal of reducing the number of mine fires, explosions, and gas outbursts in mines by 25 percent by the year 2000?

Mr. ARY. We are trying to reach that goal, yes. We are not on schedule. I couldn't say exactly what it is because we can't predict mine disasters. But it's unfortunate that this budget item is reduced. We have had some very good success in this area, and the self-contained self-rescuer is a good example, and it's going to save lives. And the sooner we can get something else out like that, the better off we are.

The methane control and the methane detectors, if we could have had a methane detector at each intersection of entries, I think probably the Kentucky fire or the Kentucky disaster might not have happened. We'll never know, but these are the areas that a little bit goes a long way, because it's difficult to say how much a couple of hundred thousand dollars can do.

We have kept in our base somewhere around $1 million or so for the mine disaster prevention. That does not fit in with the $2.5 million that had been added on, but mine fire research is going forward, and we have done an awful lot of work with MSHA recently on belt fires and the testing of belts. We are also working with them on ventilation over the belts.

We have developed a sheathed charge which can be used on shift for special breaking of coal or of rock that has fallen over, whereas before you would have to shut a mine down and get all the men out before you were allowed to blast or to clean up anything, but with the sheathed charge it has a method that attaches the explosive onto the rock you want to break and all the force goes into the rock rather than coming out into the face. So we have had good work on this.

Our explosive program has been very good, and we are doing an awful lot of work on the outside. This is one, as I say, it is too bad that we have had this reduced because here again everybody has a little different idea of what the priority ought to be on this.

Chairman BYRD. What was the request at the OMB level for mine disaster prevention research funding?

Mr. ARY. We asked for $7.4 million.

Chairman BYRD. $7.4 million?

Mr. ARY. Yes, sir.

Chairman BYRD. And your budget calls for what?

Mr. ARY. $4.6 million.

SELF-CONTAINED SELF-RESCUER

Chairman BYRD. You spoke of the self-contained self-rescuer. The Bureau has been working for a number of years on this. What progress have you made?

Mr. ARY. The rescuer is being manufactured by an organization and it's on the market. It became available last year. We received MSHA approval and the manufacturers have started making the units. We are going out in a test program this year to see how they hold up under experimental conditions, which would be harsher than what you would normally use.

It is a fine piece of equipment. It is something that you can wear on your belt and not have to carry in a pack. You have it with you all the time, and I think in several of our mine fires the witnesses that we have discussed it with indicated that had they not had to go to the wall to pick up the rescuer, that there would have been more saved. So we think it is going to save lives and is a very fine piece of equipment.

Chairman BYRD. Did you work with private companies on this project?

Mr. ARY. Yes; we did. This was one that we had an idea and a private company liked the idea and came in and cost shared this and actually has done the manufacturing of this. We have worked with them on design and also on their operation procedures.

Chairman BYRD. With more research could the weight be reduced by 50 percent?

Mr. ARY. We have discussed this. It's not the weight now. We're talking about a piece of equipment that is about the size of a softball, whereas before it was kind of a backpack item.

The piece of equipment that was a small piece of equipment, belt used before, was about the same size, but it had half of the capacity as the one that is now developed. So what we would be working on is not to reduce size, but we would try to find chemical procedures or methods in which we could increase the use, the capacity of the piece of equipment.

We have discussed this with the company that is manufacturing it, and some of the other companies have come to us and discussed it also, and right now we do not have anything on the drawing boards in which we are moving forward.

This is a case where we think that we have worked with the company and have indicated that these kind of breakthroughs can be done. So we are hoping now that the companies will pick this up. This is going to be a tremendous moneymaker. Eventually this will be required. So we are hoping that they will carry forward this initiative now to increase the capacity of the rescuer. We are going to be with them looking over their shoulder working with them on it also, knowing our people, because it is a very, very good piece of equipment.

RESEARCH REDUCTIONS

Chairman BYRD. Well, Mr. Ary, I have had an opportunity to ask quite a lot of questions, and Senator Domenici is here now and I'm going to yield to him.

But before I do, may I just say for the record that I am appalled at the reductions that appear in this budget for the Bureau of Mines, for health, safety, and mining technology, occupational health, advanced mining systems, mine safety systems research, mine disaster prevention and throughout.

I just cannot understand how such reductions can be justified, and I don't think any price tag can be put on the health and safety of our coal miners, and I will do everything I can to restore these reductions.

I think that you are trying to do a good job and you've been very candid in your testimony. I think it's obvious that you cannot justify these reductions, and you don't attempt to do so because you know there is no justification for them.

So I compliment you on your testimony, and I'll do whatever I can to restore these funds with the help of the subcommittee and full committee so that you can continue to go forward in the kind of research that needs to be done. It's unconscionable to think of reductions of this magnitude.

Senator Domenici, would you please proceed.

Mr. Ary. Could I first make a comment?

DIRECTOR' COMMENTS

Chairman Byrd. Surely.

Mr. Ary. I appreciate what you've just said.

I asked our people to get a chart to show the funding that the Bureau has had. The dark part is the budget that we have been able to get out of the President, and the shaded material is the add-ons.

I came into this at about this point right in here. Our budgets were down at this level in 1986 and 1987, and we have been increasing the amount of money that the Department and the administration has granted us. This has been a hard, and I don't know if it's winning, but it's a hard earned fight, and we have been as candid with the Department and other people as I have with you because I feel very strongly, and I know that you are aware of that, that we cannot allow our research to go downhill if we are going to expect to compete in a global battle relative to natural resources.

I watched it in the uranium business and I watched it in the potash business, and I'm watching it now in the coal business where outsiders and Third-World countries, the international operators are winning our market and are winning the battle, and there are a lot of reasons.

But, again, the innovative approaches that we are going to have to take are going to be this answer. Now the increased productivity and competitiveness of our mining properties and of our mining industry is not as a result of safety.

The studies that we have made on high productivity mines have indicated that they have shown the greatest improvement in safety, and our safest mines are our most productive mines, especially coal. We have not seen that same ratio of safety reduction and high production in the metal mines. We are a little less labor conscious at some of those because we have the large open pits or we have the block caving.

We need and have been convincing some of our people that this program should move forward and not be held back. I've got another budget year coming up next year, and I'll tell you whether I have any more success.[Laughter.]

But so far I think that we have gone to our people and talked to them about our problems and we have taken them into the field. We have had OMB out looking at the mines and for the first time they know what a plasma arc furnace is, and they understand how these big 100-ton trucks can go over the side of a hill if they are not programmed properly or if we don't understand the technique.

I must say that this was not all done just by the Bureau. This was done because some of the people are beginning to see some of the problems that we are faced with, and I think now that we are coming into a new era there is going to have to be some additional effort put forth on the environmental side in order to keep us competitive as well as what we have been doing here on the research.

But I do appreciate the kind words because the Bureau employees have really done a yeoman's job since I've been here, and it has been a real pleasure to work with them. I have never worked with a group I think that I've enjoyed so much and that have as much on the ball as what we have at the Bureau.

Chairman BYRD. Well, the Congress, and particularly this subcommittee have pressed hard to increase the research moneys, especially in health and safety, and we are not going to let up. The emphasis should not be reduced, and of course a casual look at the budget will indicate that the emphasis on health and safety of coal miners and other miners in other industries than the coal industry are being reduced. The emphasis is being reduced, and that shouldn't happen, and I'll certainly be doing what I can to work with you in seeing that it doesn't.

SENATOR DOMENICI'S COMMENTS

Senator DOMENICI. Thank you very much, Mr. Chairman. I want to assure both you and Mr. Ary that I don't intend to take very long. I understand most of the questions I would have asked have been asked.

But I would like to open with these few remarks and observations, and then ask you about the Mineral Institutes that we have at our universities.

Let me second the motion here, Mr. Ary. I believe that you have been very good for the Bureau of Mines, and I compliment you on the job you are doing.

Mr. ARY. Thank you.

Senator DOMENICI. I also want to say with the chairman present that the Bureau of Mines has always been one of the agencies of this Federal Government of which we could be most proud. When it came to the areas of mining expertise, this was a class act.

Frankly, I think what is going on around here is that we take class act, line operations of this government for granted. They are not very sexy. They don't make a lot of noise, Mr. Chairman. They are not a new initiative that somebody is pushing as the wave of the future. The end result is that these operations never get the attention that somebody's new idea for a new domestic program gets. I want to briefly share what happened to my State.

Mr. Ary mentioned potash. We had a situation where the potash industry in New Mexico was about to die. This poor little city in our State hired big lawyers to file lawsuits on dumping, and it just about broke them.

We asked the Bureau of Mines as professionals to give us evidence about the potash industry and what Canada was doing in the world market. The Bureau of Mines didn't choose to beat up on Canada. They just gave us the facts. They produced significant evidence in just 2 months about what Canada was doing to distort the market using the numbers and their expertise.

The end product, let me just tell you, was that Canada settled the lawsuit with the United States. We have a potash industry in New Mexico, and it didn't cost our people $2 million to file a lawsuit, because an agency of the Federal Government was thrilled to be asked for evidence and facts that they were charged with producing.

Mr. Ary, it seems to me that in looking to the future, there are two things that apply to the mining industry these days. One is environmental demands. I certainly urge that if you are not, the Bureau devote a great deal of attention to the science of the environment and the mining industry, and wherever you can you direct the research in those areas.

Second, in my few years of working with high science and those who are doing research, I find that if they work with the business community who are out there applying the techniques, together you can solve problems. Together you can come up with new approaches. Each knows what the other is doing and that that's the way to capitalize on research money. Research money that is not being driven by the industry that uses it and with their full participation is not effectively utilized. Sometimes you find it, and it takes 15 years for anybody to give a damn about it.

I urge that wherever you can, and you may already be doing this, in all of your research, including the universities, which I'm going to ask you about in a minute, that you exert the Bureau's influence to pull business into those relationships.

I held a conference in one of my cities with all of the mining companies in the United States to see what one of the national laboratories was doing that could help them solve mining problems. The first thing I was amazed at was that the industry did not know what the scientists could help them with. Just bringing them together was an act of technology transfer because they began to talk together about what might solve their problems.

MINERAL INSTITUTES

So with that observation I just want to argue one point. I agree with the chairman that we shouldn't be cutting this Department in the areas he mentioned. I wonder why, if you are so proud of the university program, the Mineral Institutes, and I think you have said that collectively they represent the Nation's best source of future professional talent in the mineral field, I wonder why we shouldn't continue them?

I understand your budget problems, and maybe I ought to ask it this way. If we fund the Mineral Institutes and say we want them to continue, won't we be contributing significantly to the development of professional talent and research in this area?

Mr. **Ary**. Before I answer that, I think isn't happy birthday in order today?

Senator **Domenici**. Yes. [Laughter.]

Mr. **Ary**. I thought that maybe we all wear red ties when we have birthdays, and I saw yours and I thought I ought to ask that question.

Senator **Domenici**. I wear them a lot. My birthday isn't every day, but it is today. [Laughter.]

Chairman **Byrd**. Happy birthday.

Senator **Domenici**. Thank you, Mr. Chairman, and thank you.

Mr. **Ary**. If I may postpone the university comment for 1 minute.

Senator **Domenici**. Sure.

Chairman **Byrd**. How did you know this was his birthday? [Laughter.]

Mr. **Ary**. Well, this is real interesting. I have a friend back there that I used to raise money for when he was running for office, but now that he is in office, every once in a while he tells me all these little things, and Gary Carruthers said you ought to remember that today if he shows up at your hearing it's his birthday. [Laughter.]

Senator **Domenici**. I didn't know that our Governor knew of my birthday. [Laughter.]

Mr. **Ary**. I also have a fellow named Clete Uhlenhopp who keeps up on those things for me, too.

You brought up a couple of points-----

Chairman **Byrd**. Do you have anybody in West Virginia that keeps up on things for you? [Laughter.]

Mr. **Ary**. Two people. I know who to go to to use shovels when we dig. There were only two of us down there that didn't end up cutting our hands, and it was two guys who knew how to get on the business end of a Mexican banjo.

ENVIRONMENTAL ASPECTS

But you talked about a couple of things that really I feel I almost have to talk about, and that is the environmental problem that we're faced with and the plans that the Bureau has and the science and the involving of industry.

I mentioned in my opening statement that the Bureau feels that the environmental costs and the environmental activities are going to continue to increase in the 1990's, and it's going to be a big part of our program.

We asked for a small sum of money in this budget, and we are looking at the possibility of doing some work and finding some other money this year and next year to initiate some of our environmental programs.

At the present time the Bureau of Mines has more ability to help resolve some environmental problems and Superfund problems than anybody else in the Government. Waste areas to some people are ore bodies to us. We look at the uranium tails in New Mexico and Colorado, we look at them as a low-grade ore body. At one Superfund site, they have uranium now that averages maybe 0.07 in some of those tailings. Well, we are putting 0.07 through mills now.

So we look at these things on the basis as nothing more than an ore body. If you've got a waste area, you have to delineate it, know what's in it, how much is in it and where it is. So that is what the Bureau does. We do these things well.

We are planning to request a very large program in future years because we think that we have some areas that need to be looked at. Our plans right now, we are working with EPA at the staff level in an area where we are trying to help them set the regulations and the standards.

We have several mining engineers working in EPA regional offices. We think it's important that they work with EPA. We are going to continue to keep them on our payroll and we are going to pay them, but we want them out there so that the EPA people can learn how to handle some of these problems.

Many years ago back in the early fifties when we first started talking about land reclamation and environment, one of the companies I worked for made a decision that the way to clean up the environment is to find a way to make a profit. So this is the approach that we have been taking with industry and with various organizations in trying to find out how they can enter into this program and actually make a product that they can sell and recover some of the money that it takes to clean this up.

Industry sat down with environmental groups at Socorro about some 10 years ago in which 15 industry representatives, the Sierra Club, and about 15 other environmental groups along with the academic community sat down to talk about environmental problems. It was the first time that I had been involved in environmental activities where we talked to each other instead of yelling across the table.

We yelled to start with and then we settled down, and it turned out that there were areas where we could cooperate and work together, and I think we are finding now that this will happen more and more as we go, and that as a result we are able to come to closure and to grips with some of the problems that we have.

Now that particular meeting was followed by one at Flagstaff in which the four corner States were involved, and at that time we brought the Indian tribes in because of the uranium tailings problem. That was one problem we could sit down and talk about, and it has worked out very well.

Since then I have been trying to encourage the Government to do the same thing. If we can get the agencies that are involved to work together rather than to have one agency go out and contract with a third party, if we can get them to work together, then I think that we are in good shape.

The OTA report has made this type of recommendation, and we have followed this with a recommendation to our Secretary that we be assigned as the lead agency in the Department to start looking at this. We do have a policy group in the Department, but you could not find a better group than the Bureau of Mines, the Bureau of Reclamation, and the USGS to handle this type of problem.

I'll get off my soap box. I could talk a lot about this. I have a very strong feeling about it.

MINERAL INSTITUTES

Senator DOMENICI. Well, we're interested in our mineral institutes centers, one in New Mexico and one in West Virginia and about 30 other States. If we were to fund them, would we be funding something that is good?

Mr. **Ary**. When I first came to the Bureau, I was told that the administration had never budgeted for the Mineral Institutes and the Generic Centers. I testified before the Senate committee before I came to the Government that I was in favor of the Institute program. I think this is a very good program and it could be a tremendous help to the Bureau and to industry and in a lot of ways providing trained people, continuing to have professors available, having the universities work in cooperation with the Department or with the Bureau of Mines in their labs and in the labs at the schools.

I've tried each year that I have been here to budget for this, and this year is the first time that we have gotten approval. The Department agreed to budget for the Generic Centers and so did OMB. So for the first time now we have reached an agreement on that side.

We did not budget for the allotment grant program. I suggested 2 years ago that we not budget for them until we had control over how the funds would be expended. Until then, we should not participate with the Institutes in their allotment activities. We budgeted for the research grants each year, but they have not made the cut until this year.

What I would like to do is see the administration budget for the allotment grants so that the Bureau can in effect have a little more control over those programs. Right now with the Generic Centers, we feel comfortable in that they compete for projects and we know that we are getting peer review and we know that we are getting good work.

On the allotment grants, we do not see that. However, there are some plans that we have that we hope that we can get involved in later on with you and discuss so that we will increase that particular program.

The funding of the Generic Centers and the Mineral Institutes is a good idea. We utilize the universities, and they are our first line of supply of personnel to us and the industry. So it is money well spent.

You've got a young fellow by the name of Larry Latman at Socorro that had been shepherding the funds very closely because from time to time he has called and is willing to utilize some of those funds in co-op type programs, and luckily we have been able to go to industry and get them to co-op, and he has been able to use his money academically.

BOM/EPA COOPERATION

Senator **Domenici**. I just had one last question. When you speak of using Departments like the Bureau of Mines in an advisory role where they have expertise for a Department like EPA who is involved in environmental cleanup, you've told us that you are trying to do that in an interagency manner and that it is typical of trying to reach agreements between government agencies.

Just briefly, is that working?

Mr. **Ary**. Yes and no. It is working in that we are meeting with them and we have good relations with them, and they have asked us to do a lot of work for them on a reimbursable basis. I personally feel that the reimbursable program is not what we ought to be looking at.

We are researchers and they are regulators, and we should split that tie. We know what types of things they need, but until they call us and say will you look at this, there is not much that we can do. They should probably regulate and we should probably research and do the work to show them how to mitigate some of the problems and to maybe do that type of work.

This is the type of program that OTA had suggested as an alternate, but I don't want to say that it is not working because we are talking, and that is the main thing. We do meet with them and we do discuss with them. We have testified in their hearings and we have had a lot of contact with them. If we don't have the contact, then we get estranged and then we do have a problem.

Senator DOMENICI. Thank you, Mr. Chairman.

Chairman BYRD. Thank you.

MINERAL INSTITUTES

What did you request at the departmental level and at the OMB level for the Mineral Institutes program?

Mr. ARY. Well, we asked at the departmental level for $10 million. The department asked for $6 million from OMB, and we received $4.2 million.

As I said earlier, and Jim is reminding me, the 4.2 million is strictly Generic Institutes and there is no allotment grant money.

REGULATORY ANALYSIS

Chairman BYRD. The Bureau is requesting an increase of $100,000 for regulatory analyses, including an analysis of clean air legislation. The Senate spent almost 4 months on the clean air bill and the House is moving toward action. What will be the Bureau's role within the administration as this legislation moves into conference?

Mr. ARY. What the Bureau has done and will continue to do is use our policy analysis group that has developed some socioeconomic models to evaluate the various pieces of legislation and show where the impact is and who is affected. We can show what the various pieces of legislation will do to household costs of electricity and what will happen to the cost of copper or aluminum. We will continue to do this. We have taken this show on the road here at the Hill, and Mr. Bennett who is here has been with many of the staff to show them this.

That is the type of thing we will continue to do along with looking at possible ways in which we can also assist in the cleanup of the stack gases or anything like that. I think we've asked for about $2.5 million to continue this work. We have both a research portion in the program as well as a policy analysis portion.

Chairman BYRD. Do you have any idea what the Bureau's role will be as this clean air legislation moves into conference? Will you have any role to play there?

Mr. ARY. No; we don't. We have kind of forced our way into some of this because we have no mandated role, but we feel that it is something in the future when we see something that is happening that is going to affect the minerals industry, we are speaking up. So we have intruded into some other areas, but we do not know what our future role will be. We do know we are going to continue to push in this area. It would be more as an adviser than anything else because we don't have the mandate to do something.

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. Thank you for your testimony, Mr. Ary.

The subcommittee as well as individual Senators will have additional questions to be answered for the record, and I ask that you respond to the questions within the next 3 weeks.

Mr. ARY. Mr. Chairman, thank you. I have looked forward to this after my fiasco last year, and I have really appreciated what you have done, and needless to say, I don't have to tell you how much the committee has pushed that along. This has been the real reason that the Bureau has had a resurgence I think, and it has been this committee's activity.

Chairman BYRD. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Research

Senator Byrd. As with past budget requests, the Bureau of Mines' fiscal year 1991 budget proposes to reduce research funding by eliminating most of the Congressional add-ons for the current year. The Administration is proposing to reduce the Bureau's research program by $21.5 million or 23 percent. Has the Bureau budgeted for terminal leave payments; and if so, how much?

Mr. Ary. No, sir. The Bureau has not budgeted for any extraordinary terminal leave payments as part of the reductions presented in this budget.

Initiative - Stewardship

Senator Byrd. You are proposing a number of initiatives for FY 1991 - Stewardship; improving and upgrading your computer and information functions; and so forth. Why do you choose to expand those non-programmatic activities while you propose to slash the basic research budget and reduce overall staffing?

Mr. Ary. The Bureau budget represents a balanced program designed to meet the needs of the entire minerals sector of the economy. The initiatives that you refer to are designed to address the most pressing needs facing the Bureau and the minerals industry today. The Information and Analysis upgrade, for example, is a critical need at this time and must be addressed in order to continue to deliver the products so highly prized by the Congress and the entire minerals information using community.

Health, Safety and Mining Technology

Senator Byrd. How can we continue to send coal miners into the depths of the earth and into thinner and more dangerous seams while at the same time, the Administration is drastically cutting the very research program that could save those miners' lives? Does this sound logical to you?

Mr. Ary. The bottom line of the Health, Safety and Mining Technology research efforts is accident prevention, and reducing the health and safety risks to miners is of paramount importance. The funding for the program is a compromise between reducing the growing Federal deficit and attempting costly, short-term solutions toward making future mines safer. With the proposed funding, the Bureau will continue to design the health and safety hazards out of coal mining operations, reduce injuries and deaths, and lessen the degree of human toil in mining.

Senator Byrd. How can the Bureau continue to operate its Health, Safety and Mining Technology program effectively with such a large reduction proposed year after year?

Mr. Ary. The proposed reductions are largely the result of different emphasis placed upon research activities by the Administration and the Congress. Nearly all of the decreases result from the additional funds added by the Congress during FY 1990. While these reductions are disruptive to planning research programs, the Bureau compensates for the funding differences by prioritizing its research efforts and maintaining an adequate level of funding to ensure that the highest priority projects will continue.

Senator Byrd. How can multi-year research projects be conducted effectively?

Mr. Ary. In this situation, multi-year projects are conducted with difficulty. However, as stated previously, the Bureau has designed what it considers a balanced research budget. This insures that the core Bureau research program remains intact over a period of time, and will continue to provide further advances in health and safety technology.

Senator Byrd. How much was requested from the Department for the Health, Safety and Mining Technology program?

Mr. Ary. The Bureau's initial FY 1991 budget estimate for the Health, Safety and Mining Technology program was $51,724,000.

Senator Byrd. Don't the injury and death statistics suggest that there should be an increase in the Health, Safety and Mining Technology program rather than the proposed 30% decrease?

Mr. Ary. During recent years, the total fatalities at all mining operations dropped to about 100 each year. While this is still unacceptable, mining deaths have reached the lowest level ever recorded. Yet accidents continue at more than 33,000 annually, with injuries only slightly less. This consistent level of accidents and injuries suggests that the mining industries have been fortunate recencly, as the potential for a greater number of deaths is still present. Although the Bureau maintains a viable research program to reduce injuries and deaths in the mines, additional funds could be used, as with all research and development programs, to enhance and accelerate current efforts.

Occupational Health

Senator Byrd. The National Center for Respirable Dust, which is headquartered at West Virginia University, has become internationally recognized for its leadership in researching the causes of respirable dust diseases (pneumoconiosis). The Center is, I believe, the sole source of research of possible treatments to protect against, and possibly reverse, the effects of this dreadful disease. Why are you proposing to eliminate funding for this important work?

Mr. Ary. In FY 1991, we have included the Respirable Dust Generic Center with the funds we are requesting for Research Grants under the Mineral Institute program. Mineral Institute colleges and universities will be eligible to submit proposals in any or all of the six generic minerals technology areas. Proposals will be competitively evaluated and selected for funding by the Advisory Committee.

Senator Byrd. For the record, in priority order, please provide a listing of occupational health research projects and associated costs which would be eliminated or reduced in the Administrations's FY 1991 proposed request.

Mr. Ary. Yes, sir.

FY 1991 Occupational Health Projects

Projects[1]	FY 1991 ($000)
Scheduled for elimination:	
Impact Noise Sources	300
Auxiliary Fan Noise Cancellation	120
Undiluted Diesel Exhaust Emissions	75
Field Study to Access Noise	80
Health Research Contracts	95
Generic Center for Respirable Dust*	2,500
Total	3,170

* Eligible to compete for Mineral Institute Research Grants

Projects[1]	FY 1991 ($000)
Scheduled for Continuation:	
Personal Diesel Aerosol Sampler	125
Empirical Cutting Model	150
State-of-the-Art Dust Control	205
Diesel Emission Technology	119
Monitors for Dust Mass Measurement	27
Mine Acoustical Monitoring	80
Total	716

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[1] Projects listed in priority order for retention.

Scheduled for Completion:

Processing Plant Dust Control	200
Thoracic Dust Control	200
Longwall Dust Control	295
Quart Exposure of Coal Workers	325
Total	1,020

Mine Safety Systems Research

Senator Byrd. Would you provide for the record your research investment in each of these projects to date as well as the cost to complete each?

Mr. Ary. Yes, sir. We will provide the information.

Mine Safety System Research Projects

The funding to date along with the total amount required to complete each project that received additional FY 1990 Congressional funds are as follows:

Project	Funding To Date ($000)	Funding To Complete ($000)
Coal Air-Hydrohoist	1,243	1,350
Power Cable Protection	197	691
Cable Reel Thermal Characterization	237	750
Safe Haulage System	298	0
Mobile Equipment Safety	3,642	90
Total	5,617	2,881

Mine Safety Systems Research

Senator Byrd. What is the FY 1991 cost to continue each of these projects?

Mr. Ary. I will provide the information for the record.

Mine Safety System Research Projects

FY 1991 cost to continue each of the above projects is:

Project	FY 1991 Funding ($000)
Coal Air - Hydrohoist	450
Power Cable Protection	291
Cable Reel Thermal Characterization	250
Safe Haulage System (completed FY 1990)	0
Mobile Equipment Safety	90
Total	1,081

These funds are included in the President's FY 1991 budget request.

Mine Disaster Prevention

Senator Byrd. Methane control and mine fires are mine-related concerns -- concerns for companies and certainly for miners. What have you learned to date in these areas that convinces the Administration that it can afford to reduce the funding for Mine Disaster Prevention?

Mr. Ary. Commercialization of research products already developed by the Mine Disaster Prevention program should provide measurable progress toward meeting the goal of reducing mine fires, explosions, and gas outbursts. For example, the rock dust meter, to be offered commercially by Ocenco before the year is out, will provide mine operators with the capability of fast, accurate analysis of rock dusting to prevent dust explosions. The Bureau will also continue to work with the mining industry as well as MSHA to enhance the industry's awareness of the dangers of underground mine fires and promote the latest methods and technology to prevent, detect, and suppress fires.

Senator Byrd. Have you completed all the ongoing projects in this area?

Mr. Ary. No. Research is still needed in these areas, however, only the more urgent problems will be addressed. Greater emphasis will be placed on technology transfer in these areas to speed solutions to mining industry problems.

Senator Byrd. If an additional $4 million were available, what specific projects would you conduct or add money to in this area? Which of these are your highest priorities?

Mr. Ary. We will provide the information for the record.

Mine Disaster Prevention

In order of priority, we would conduct research in the following areas:

Fire Suppression - Investigate techniques and products for effective suppression of mine fires. Continue efforts to develop techniques to improve the industry's mine fire preparedness. ($700,000)

Mine Escape and Survival Technology and Techniques - Monitor the development of the person-wearable SCSR, conduct an analysis of hazardous conditions affecting mine escape, investigate improved sources of oxygen for self-contained breathing apparatus. ($500,000)

Fire Detection - Develop technology for the early detection/prevention of spontaneous combustion. Improve mine monitoring systems and fire detection strategies for early warning of fires. ($800,000)

Explosion Suppression - Develop techniques for explosion detection and control. Continue research related to explosion-proof seals. ($700,000)

Explosives Technology - Investigate chemistry and detonation physics of emulsion explosives as related to pressure desensitization. Expand efforts related to the effects of aging on permissible explosives. ($800,000)

Methane Control - Investigate the techniques of methane control for high-production mining systems, develop innovative techniques for converting methane to harmless products. ($500,000)

Ground Control

Senator Byrd. Ground Control research is proposed for a $1.6 million reduction (10% decrease) from the FY 1990 enacted level. This reduction is directed at the mountain bump (coal) and rock burst (hardrock minerals) research. As you and I are well aware, mountain bumps and rock bursts create violent ground failures which can be fatal to miners. How can you reduce your ground control efforts when you have people's lives at stake?

Mr Ary. The additional funds added during FY 1990 to the Ground Control program by the Congress were used to purchase and install costly data collection equipment at several bump-and-burst-prone mines, and to accelerate overall data collection. During FY 1991, we will continue to obtain additional data from the installed monitoring devices, and analyze the substantial quantity of information collected the previous year. The laboratory efforts to complete these tasks are less costly than the extensive field investigations required in FY 1990. The planned funding is adequate to lead to a better understanding of the mechanisms causing mountain bumps and rock bursts, and to determine effective means to control or eliminate these catastrophic events.

Senator Byrd. Have you learned everything you need to know in these two areas?

Mr. Ary. As in the case of most scientific pursuits, we will probably never be satisfied with the knowledge we have available. We do feel, however, that we are on the verge of determining methods which will be effective in recognizing changes in geologic conditions, shifts in loads and stress, rock movements, and so on. With this strategy, potential hazards could be identified prior to and during active mining.

Senator Byrd. Has all that information been transferred to industry and is it being used by industry?

Mr. Ary. We continue to release the results from our Ground Control projects through Bureau and industry publications, presentations at seminars and conferences, and Bureau sponsored seminars and workshops. We have been quite successful in transferring valuable Ground Control technology to the mining industries, particularly in the mountain bump and rock burst areas.

Senator Byrd. What projects will be affected by the 18 percent reductions?

Mr. Ary. Our proposed FY 1991 mountain bump research activities call for a funding reduction in five projects, with another project reaching a successful conclusion at the end of FY 1990. Similarly, five rock burst research projects are scheduled for a decrease in FY 1991.

Senator Byrd. What funding will be needed to continue each of these projects in FY 1991?

Mr. Ary. I will provide the information for the record.

Mountain Bumps and Rock Burst

The additional funding necessary to continue each of the mountain bump and rock burst projects affected by the reduction at an optimum level is:

Mountain Bumps	($000)
Support and Design/Coal Mine Openings	100
Coal Bump Forecast/Longwall Mining	200
Stability of Underground Coal Mines	200
Geol Studies in Grnd Ctrl (Completed FY 1990)	0
Fundamental Studies of Mountain Bumps	200
Gateroad Entry Design	150
Total	850

Rock Bursts	($000)
Rock Burst Monitoring/Galena Mine	50
Time Deformation/Deep Vein Mines	50
Rock Bursts and Failures	200
Fall Extraction Design	150
Rock Burst Mechanics & Control	200
Total	650

All of these projects, except the one which will be completed, will be funded at a reduced level within our budget request, and will continue in FY 1991.

Human Factors

Senator Byrd. You are proposing a $411,000 reduction to your Human Factors program. Mr. Ary, on page 93 of your budget justification, you tell us that additional attention should be given to how people and technology interact and work together. However, you are proposing to cut this research by 13 percent, and, at the same time, state you will focus on "high-priority" research. Isn't that a conflict?

Mr. Ary. The emphasis of the Human Factors program is to optimize human resources. By focusing on the program's high priority areas, insight will be gained to maximize the safety and effectiveness of mine workers and the technology they utilize. The most crucial aspects affecting the human in mining will be accentuated in Fiscal Year 1991.

Senator Byrd. What research are you conducting now that is too low a priority to be continued in FY 1991?

Mr. Ary. There are three areas of research that will not be continued in FY 1991. The Pennsylvania State University coal mine injury study will be completed at the end of FY 1990, resulting in a decrease of $300,000 for the Human Factors program. The project on behavioral accident simulators for predicting human behaviors contributing to accidents will be concluded in FY 1990. Work on the effects of shiftwork on miner health and performance is nearing completion and will not be continued.

Senator Byrd. What makes these projects of lower priority?

Mr. Ary. The Penn State study has provided some useful information and will be successfully concluded at the end of the current fiscal year. Future work in accident injury analysis can best be supported by industry as individual company needs dictate. The behavioral accident simulator work has progressed to its normal conclusion ahead of schedule. The shiftwork study is nearing completion and the research results must be thoroughly evaluated in order to determine the proper direction for this thrust of the Human Factors program.

Senator Byrd. For the record, please provide a list of the projects that would be terminated or reduced and an estimate of the cost to continue each of them in FY 1991.

Mr. Ary. Yes, sir.

Human Factors

No projects are being terminated. Two projects have successfully been completed and one redirected in FY 1990. Additional funding necessary to continue each of the human factors projects affected by the reduction is:

Project	Funding ($000)
Penn State Coal Mine Injury Analysis (project completed)	0
Behavioral Accident Simulator (project completed)	0
Circadian Science - Shift Workers (project redirected)	0
Miners/Unsupported Roof	100
Risk Reduction For Cumulative Trauma	50
Training and Evaluation	140
Mine Disaster Management	50
Ergonomics-Crewstation Modeling	50
Human Factors in Automation	60
Equipment Maintenance Safety	50
Total	500

Materials Research

Senator Byrd. You propose to terminate two projects and delay another in the materials research program. Does industry agree that your work on polymers and catalysts is ready to be turned over to the private sector for technology development?

Mr. Ary. It was our technical judgment that the Bureau supported aspects of the work on polymers and catalysts is sufficiently mature to the point where industry ~~can begin~~ developmental research.

Senator Byrd. Who have you talked with in industry? What have they told you?

Mr. Ary. We have not been in contact with potential industrial users, but we will encourage research personnel to conduct the discussions about which you inquired. However, it should be noted that research ready to be turned over to the private sector frequently is not picked up.

Control of Mine Drainage and Liquid Waste

Senator Byrd. You propose to reduce your research on the control of mine drainage and liquid wastes by 31%. In order to do this, you must, among other things, curtail fundamental research on metals release from mine wastes and on the development of permanent mine closure technology for inactive mine sites in the west. How can you afford to stop this work?

Mr. Ary. We don't plan to stop most of this work. However, we would reduce our efforts and stretch out the projects in order to meet budget constraints. The projects dealing with agglomeration of backfill and work at a Superfund site would be stopped.

Senator Byrd. What States will be affected by discontinuing this research?

Mr. Ary. As I just said, we don't plan to discontinue most of this research. The research efforts we would reduce would be applicable to acid mine drainage and metal contamination problems in several western mining states, particularly Colorado, Utah, California, Washington, Idaho, Montana, and South Dakota.

Senator Byrd. What specific projects are involved?

Mr. Ary. The specific projects that would be affected by this budget decrease are: hydrologic phenomena, which is directed at determining how local hydrogeologic systems contribute to acid mine drainage and metal migration; contaminant fate, directed at determining how metals migrate from mine wastes; hydrologic control, which investigates physical and chemical barriers for controlling acid mine drainage; and research at a Superfund site.

Senator Byrd. What would it cost to continue these projects on schedule in FY 1991?

Mr. Ary. It would require approximately $1.6 million to continue these projects into FY 1991 at the schedule projected in our planning documents.

Controlling Acid Mine Drainage and Metal Recovery

Senator Byrd. You also propose to terminate research on controlling acid mine drainage and metal recovery at what you describe as a major Superfund site. How serious a problem is acid mine drainage?

Mr. Ary. Acid mine drainage is probably the most serious environmental problem that arises from coal and from metal mining. In the western mining districts, heavy metals are leached from the ore deposits by acid mine waters and the drainage is sterile and toxic to all wildlife, aquatic species, and humans. The Forest Service has recently estimated that there are 1,500 sites in western states with significant acid mine drainage problems. They also have stated that acid mine drainage is their most intractable and costly reclamation problem. Other Federal land management agencies and western States have severe reclamation problems because of acid mine drainage and there are no viable solutions. The total number of acid mine seeps in the western states associated with past hardrock mining problems has not been inventoried, although there are probably more than ten thousand. Many of these are in the Rockies at high altitudes and are not accessible year round. In the Appalachian coal regions acid mine drainage has contaminated thousands of miles of streams making the water sterile for aquatic life, damaging to vegetative and forest systems, and unfit for human consumption or use.

Senator Byrd. Would you provide a few examples of how it affects the environment?

Mr. Ary. The source of acid mine drainage is the oxidation of pyrite, which commonly occurs in Appalachian coal and the western metal mining districts. When exposed to oxygen and water through mining activities, pyrite oxidizes to produce sulfuric acid which can then dissolve toxic metals. Because pyrite and metal containing ores are present in large quantities, the problem does not disappear after mining ceases. Bacterial action accelerates acid production and the mobilization of toxic heavy metals; hence, the problem tends to get worse with time.

The formation of acid waters and the migration of metals often exhibit long latency periods and sometimes become evident years or decades after mining ceases. Many of the acid seeps in the Rockies, for example, are a result of mining that took place at, or before, the turn of the century.

A recent California study indicates that at most problem mines, the damage to surface waters and aquatic life is confined to roughly ten miles downstream from the point of discharge. The following examples are typical of significant acid mine drainage problems.

The Iron Mountain Mine, 9 miles west of Reading, CA, generates acid mine drainage from the site, first worked in 1879, that drains into creeks which eventually flow into the Sacramento River and impacts the drinking water supply for Reading. Zinc, copper, iron, and cadmium impact the Keswick Reservoir. The creeks are nearly devoid of aquatic life; fish in the Sacramento River have copper and cadmium concentration in liver tissues at levels affecting reproduction, and the use of the reservoir has been temporarily discontinued as a precaution for public health during uncontrolled spill events.

The Eagle Mine site, Eagle County, CA, contains 7 million tons of mine tailings spread along the Eagle River. The EPA has detected high levels of iron, manganese, zinc, copper, and cadmium downstream from these tailings. Acid mine waters are also rising in the mine.

Senator Byrd. Where is this Superfund site?

Mr. Ary. The Superfund site is the Bunker Hill complex in Kellogg, ID.

Senator Byrd. What stage are you in with respect to your research there? What has been done so far and what remains to be done?

Mr. Ary. Research has focused on delineating the zones in mine workings that contain high levels of reactive pyrite and that have significant water infiltration. Progress has been made in both areas: some of the highly reactive zones in the mine have been identified and the fracture system by which water infiltrates the mine is being determined. Research needs to continue on mapping and delineating the sources and water migration pathways in this mine. Once this information is obtained, various control strategies ranging from grouting to selective water treatment of reactive zone water must be considered. Additional work is being focused on new treatment technologies that would recover values from the metal laden acid mine drainage and would treat the onsite tailings which continue to contaminate water resources. These efforts must continue until environmentally sound abatement/mitigation methods that have feasible costs are identified.

Senator Byrd. Does the work there have applicability to other sites?

Mr. Ary. Yes, although there are a number of site-specific factors that impact on acid mine drainage and metal migration, the technology we are looking at will have wide applicability to different sites.

Senator Byrd. If you were to continue this project at the current level of effort, how long it take to complete? What would be the annual cost?

Mr. Ary. To complete research at Bunker Hill will require about five additional years at a cost of approximately $500,000 per year. Engineering studies and control/treatment strategies to implement AMD control, water treatment, and tailings treatment based on the information obtained in these fundamental studies will cost considerably more. A more comprehensive program dealing with the broader issue of metal mine acid mine drainage, including problems on Federal lands, would cost on the order of $3.2 million per year for five years.

Acid Generation from Coal Refuse

Senator Byrd. You propose to delay your research on acid generation from coal refuse. How serious a problem is acid generation from coal refuse? How widespread is the problem?

Mr. Ary. Acid mine drainage adversely affects several thousand miles of rivers and streams in the eastern and central United States. Acid generated at abandoned coal refuse piles is estimated to be responsible for about 15% of the total. Moreover, much of the over 100 million tons of coal refuse that are produced annually in the United States is acid generating. Since pyrite is concentrated in coal refuse, the quality of water draining from coal refuse is often of such poor quality that extraordinary measures must be taken to bring it into compliance with effluent standards.

Senator Byrd. What would it cost to continue this research on schedule in FY 1991?

Mr. Ary. The research on acid generation from coal refuse, if allowed to proceed in FY 1991 at the rate previously projected, would cost $405,000.

Solid Waste Management and Subsidence Research

Senator Byrd. You state in your budget presentation that, "abandoned mined lands in coal and other mining regions present serious environmental problems associated with unreclaimed mines and refuse impoundments, waste piles and from coal cleaning plants, mine subsidence and mine fires." Why is the Bureau reducing its efforts in coal mine reclamation in the midwestern United States? Which States will be affected by this reduction? What States are involved?

Mr. Ary. The reduction to which you are referring is the special project for the State of Arkansas being done by the Bureau in conjunction with the Soil Conservation Service in the midwestern U.S. This project is lower in priority compared to other reclamation projects in the midwest. It is not a general reduction in our efforts in the midwest and only the State of Arkansas is affected or is involved.

Senator Byrd. How does the Bureau's program in coal mine reclamation relate to the Office of Surface Mining?

Mr. Ary. Work at the Office of Surface Mining on soils and revegetation is directed towards the soil reconstruction and revegetation requirements of the regulations they are required to enforce prior to bond release for a mine operator. BOM research is more basic, and addresses the physical and chemical soil properties which contribute to soil productivity, and the adaption of various plant species to various constraints and environments. With reference to the Arkansas project, soil and revegetation research is usually site specific, and region specific at best.

Senator Byrd. At one point in your budget presentation (pg. 147) you state that, subsidence research will place additional emphasis on water issues --- preventing and mitigating damage to wells streams and aquifers." Yet, on the following page (148), you state "Proposed research to address hydrologic effects of longwall subsidence will be reduced." Would you explain the apparent inconsistency?

Mr. Ary. The need for increased emphasis in hydrologic effects of longwall subsidence such as preventing damage to wells, streams, and aquifers is fundamental to subsidence issues. However, because of budget constraints this work will have to be conducted at a reduced level of effort.

Senator Byrd. The Bureau's Abandoned Mined Land Reclamation Research Program addresses technical problems encountered in reclaiming abandoned coal mine lands, including coal refuse piles. The Bureau places a priority on innovative technologies with nationwide application. How does the Bureau's research relate to the research conducted by the Office of Surface Mining?

Mr. Ary. All research on reclaiming abandoned coal mined lands became the responsibility of the Bureau of Mines in FY 1987 when the program was transferred from the Office of Surface Mining by Congress. The Office of Surface Mining still has a line item in their budget for research related to active mining, however, it is my understanding that this research is limited to technical problems related to the implementation of the regulations of the Surface Mining Control and Reclamation Act of 1977, SMCRA. This is why much of their research is concentrated on soils, revegetation, and water quality control.

Senator Byrd. Your budget presentation indicates that your FY 1991 request for reclamation research is the same as your FY 1990 request. What was your request in FY 1990 and how does it compare to FY 1989?

Mr. Ary. The reclamation research in the President's Budget for FY 1991 is that included in the Abandoned Mined Reclamation Research, (or AML) Program. That amount is $2 million. As you have stated, that was the amount in our FY 1990 request. The amount requested in our FY 1989 budget was $1.9 million.

National Mine Land Reclamation Center

Senator Byrd. The National Mine Land Reclamation Center is designed to conduct coordinated research and information dissemination programs to improve both the science and methods associated with the reclamation of abandoned mine lands.

The National Mine Land Reclamation Center focuses on three regions of the country and is operated by a consortium of five universities: in the east, West Virginia University and Penn State are focusing principally on acid mine drainage problems; in the Mid-west, Southern Illinois University is examining subsidence and revegetation problems associated with prime farmland; and in the West, the University of North Dakota and North Dakota State University are examining reclamation in arid western climates, especially as they relate to subsurface hydrology. West Virginia University is the lead university in the National Mine Land Reclamation Center. The National Mine Land Reclamation Center coordinates essential research on a variety of regional reclamation problems. Why are you again proposing to eliminate funding for the Center?

Mr. Ary. No funding for the National Mined Land Reclamation Center was requested by the Bureau in the FY 1991 budget for several reasons: First, the states and industry are the major beneficiaries of the results of the research being conducted, therefore, they should be responsible for the support of the program. Second, there are other pre-existing programs which can perform all of the functions of the NMLRC, such as the Abandoned Mine Land (AML) Reclamation Research Program; the Bureau of Mines in-house programs on subsidence, acid mine drainage, mine fires, and coal wastes; and the active coal mining research program of Office of Surface Mining. Finally, we had to consider the budget constraints of the Bureau of Mines.

Senator Byrd. What recommendations has the Advisory Committee on Mining and Mineral Resources Research made with respect to continued funding for the National Mine Land Reclamation Center?

Mr. Ary. The Committee has made no specific recommendations with respect to continued funding of the National Mine Land Reclamation Center.

Mineral Institutes

Senator Byrd. The Mineral Institute program was designed to stimulate the development of mineral-related research and graduate education programs at selected State colleges and universities which would also provide the opportunity for the training of mining and mineral engineers and scientists.

Under the Mineral Institute program, allotment grants are made to 32 designated colleges and universities to support basic research and education in the mineral sciences and engineering. These allotment grants are matched on a 2 for 1 basis by the colleges and universities.

In addition, competitive research grants are made in six generic mineral technology areas: mine systems design and ground control; comminution; mineral industry waste treatment and recovery; pyrometallurgy; respirable dust; and marine minerals. The Bureau's FY 1991 request would eliminate the $4,425,000 that was appropriated in FY 1990 for allotment grants. Isn't true that the allotment grants provide the basis on which the projects funded by the research grants are developed by the Mineral Institutes?

Mr. Ary. The purpose of the allotment grants was to encourage the States to establish and develop mineral-related programs of research and education at research-oriented schools of higher learning. This purpose has long since been accomplished; the minerals programs at these institutions are healthy and well supported by State and other funds. Consequently, allotment grants are no longer needed.

Senator Byrd. Given that the primary mission of the Bureau of Mines is to help keep our domestic mining and mineral industry competitive, aren't these 2 for 1 cost-shared allotment grants a good investment for the Federal government?

Mr. Ary. Maintenance of competitiveness is primarily the responsibility of private industry. The Bureau of Mines has major roles to play in research related to worker health and safety problems, environmental concerns, and mineral availability in emergencies. In addition, the Bureau has very important roles related to helium conservation, mineral statistics gathering and interpretation, and mineral studies on public and certain other lands. The matching dollars come out of the current budgets of each institution and would be expended even if the allotments were not granted.

Senator Byrd. Why does the FY 1991 request include a reduction of $1,254,00 or 24 percent for the research grants?

Mr. Ary. This is the first year for us to make any request at all for the mineral institutes program.

Senator Byrd. What recommendations has the Advisory Committee made with respect to continuing the current Mineral Institute program?

Mr. Ary. The Advisory Committee stated in its 1986 National Plan for Research in Mining and Mineral Resources that they endorse the concept of the Mining and Mineral Resources Research Institute Program of the Department of the Interior. In its 1989 Update to the National Plan, the Committee stated: that the Mineral Institute Program has made major improvements in university research in mineral science and technology, and they feel that continued encouragement by industry and Government is in the National interest.

Senator Byrd. What is your opinion of the need to establish a new generic center for strategic and critical minerals research?

Mr. Ary. We are neutral with regard to the creation of such a center. However, Congress should note the recommendations of the Advisory Committee in its 1990 Update to the National Plan where they stated that a Strategic and Critical Minerals Generic Center without further focus would defeat the purpose of founding and nourishing delimited centers of expertise and could duplicate research underway at the present centers. Therefore the Advisory Committee believes that it is not advisable to create a Generic Center for strategic and critical minerals and that it would be more productive, given sufficient funds, to create additional more narrowly focused centers." The Committee went on to say that if Congress mandates creation of a new center then the new Generic Minerals Technology Center should be established and administered under PL 98-409 using competitive processes starting with solicitations of proposals from the mineral institutes.

Helium Fund

Senator Byrd. The Bureau has completed its report on options for establishing a mechanism for routine escalation in the government price for helium and the impacts of such a pricing policy. What were the results of your report?

Mr. Ary. Along with the proposed use of a standard escalation formula for establishing a price for helium for Federal customers is consideration of a base price at which an escalation formula would be used. Four options were studied in the report. In Option 1, the base price was not increased above the current price. In Options 2, 3, and 4, the base price was increased by about $4.00, $17.00 and $28.00 respectively. Naturally, the years to repay the principal of the program debt are inverse to the amount of the price increase. Under the latter two options, revenue produced above a certain price is offset by a loss in volume sales to the Federal customer. The repayment period will be in excess of 30 years regardless of the option selected.

Two price indexing alternatives were considered, either of which will fairly reflect changes in private helium prices. The Bureau's base price would be adjusted by one of the formulas at the end of each fiscal year.

Senator Byrd. The Bureau's primary customers for helium are three federal agencies: DOD, NASA, and DOE. What has been their reaction to your report?

Mr. Ary. The helium using Federal agencies were not officially provided a copy of the pricing policy report as no increase has been established at this time and no date for any such increase determined.

Senator Byrd. Has the Bureau made any decisions with regard to helium pricing?

Mr. Ary. A proposed price increase has been forwarded to the Office of Management and Budget for review and approval. The Bureau has not received any comment or recommendation from OMB.

Senator Byrd. How does the Bureau's price for helium compare with private sector?

Mr. Ary. In our study on the routine escalation of the Government price for helium, we reported that the Bureau's price to the Federal agencies was lower than the commercial price to the private helium user, about $38.50 per thousand cubic feet compared to $39.50 per thousand cubic feet.

Senator Byrd. You continue to include a proposal to sell the helium facilities that are operated by the Bureau. How does this year's proposal differ from the proposal submitted with your FY 1990 budget request?

Mr. Ary. The FY 1990 budget proposal assumed sale of the Helium program assets during fiscal year 1990. The FY 1991 budget proposes to amend the Helium Act Amendments to include selling the assets, except for the helium inventory, and to permit Government users to purchase helium from the private sector. Legislation to implement this proposal was transmitted to the Congress in March of 1989, and introduced.

Senator Byrd. What impact would the sale of the helium facilities have on the helium reserve?

Mr. Ary. The current production from the Government's helium reserve is about 300-350 million cubic feet annually. Once the Government's production facilities are shut-down, it is anticipated that no helium would be produced from the reserve except in the case of some future emergency established by the Secretary of the Interior. At the current rate of Government production, the reserve would last some 75 to 80 years.

Senator Byrd. Your FY 1991 budget request assumes the receipt of $12,000,000 from the sale of the helium facilities. How did you determine your estimate of revenues from the sale of the facilities?

Mr. Ary. The FY 1991 budget assumes $12 million in receipts from the sale of helium assets of $6 million, approximately $3 million from Exxon fees, and $3 million from higher Federal helium prices. The $6 million figure from the sale of helium assets is revenue anticipated from the sale of surplus personal and real property. It is anticipated that the helium-using Federal agencies may acquire some or most of the rolling stock, used in the delivery of helium, when it is declared surplus. This may lower the revenues anticipated from the sale of helium assets.

Federal Financial System

Senator Byrd. The Department of the Interior Bureaus are continuing to convert to the Federal Finance System (FFS). BOM's justification states that the Bureau will continue to improve and enhance the new system. When will the Bureau's system conversion be complete?

Mr Ary. The Bureau of Mines successfully converted its data files to the Federal Financial System at the beginning of fiscal year 1990. However, some activities, not directly related to the conversion but essential to the system, remain to be accomplished. These activities include further development of internal management reports to strengthen the Bureau's administrative control of funds system and development of remote inquiry capability. In addition, the FFS is an evolving system which will require software modifications for the foreseeable future. As a result, the Bureau will be engaged in structured system testing of software developed by American Management Systems (AMS) for an indefinite period of time.

Senator Byrd. What are you currently estimating for the total cost of BOM's conversion efforts?

Mr. Ary. We estimate our incremental cost to convert and implement FFS; including fiscal years 1989, 1990 and 1991; to be approximately $2.7 million. The Department has submitted a Cost Analysis study which discusses the costs of the FFS for the Department as a whole.

Senator Byrd. How does that compare with the original estimate?

Mr. Ary. The difference between the current estimated incremental costs of $2.7 million and the original estimate of $1.5 million is $1.2 million.

Senator Byrd. What is your estimate of the costs to operate and maintain the FFS system on an annual basis?

Mr. Ary. We expect our total annual operational costs for providing financial services using the FFS for fiscal years 1990 and 1991 to be approximately 2.8 million, including the Denver Administrative Service Center's estimated fixed costs to process the FFS. The Center is charging the Bureau a fixed amount of $381,000 in FY 1990 and $445,000 in FY 1991. The FY 1992 charges will be based on the actual cost in FY 1991. Consequently, we are unable to provide, at this time, an estimate of total actual operating costs on an annual basis for FY 1992 and beyond.

Senator Byrd. Can we expect to see savings once the new system is in place? If so, how much of a savings?

Mr. Ary. It was never expected that the implementation of the system would generate savings. The system implementation effort was intended to provide the Department of the Interior with a highly automated, on-line system with much greater internal controls, and increased capability to track costs and analyze data. Notwithstanding this fact, the FY 1988 cost to provide financial services under the previous system was approximately $2.3 million, including all necessary ADP support. We estimate the cost of operating the FFS in FY 1991 will be approximately $2.8 million, including fixed processing costs on the new IBM mainframe maintained by the Bureau of Reclamation Administrative Service Center in Denver. We expect the initial incremental increase of $500,000 a year to be permanent and possibly escalate. However, in evaluating the operating increase, it should be noted that the significant qualitative differences between non-FFS systems and FFS preclude a true cost comparison.

Research Center Maintenance

Senator Byrd. You are requesting an increase of $100,000 for research center maintenance. What is the total estimated backlog at your research facilities?

Mr. Ary. The estimated backlog is $6.8 million

Senator Byrd. You have requested a total of $600,000 in FY 1991 for research center maintenance. At that funding level, how long will it take the Bureau to eliminate the backlog?

Mr. Ary. At an annual funding level of $600,000, it would take about 11 years to eliminate the backlog of current deferred maintenance projects.

Senator Byrd. Please provide for the record a list, in priority order, of the remaining unfunded maintenance projects and the associated costs by project.

Mr. Ary. Yes, sir. We will provide the material.

Research Center Maintenance

This list is in priority order within each research center.

Albany Research Center

- Water Mains. Replacement of underground water/air system. This proposed system will replace an existing system 35 years old. The present water lines restrict and limit usage and have been repaired 23 times in 3 years. $185,000
- Heating System. Replace existing heating system in Buildings 29, 30, and 31. These buildings are approximately 40 years old. $215,000
- Repair Drains. Repair the main drain line for the Central water cooling system and an interior sewer drain. $50,000
- Roof Repairs. Repair/replace the existing roofs throughout the Center. This item is for several buildings. $180,000
- Exterior Painting. Paint the exterior of the large laboratory buildings at the Center. $160,000
- Analytical Lab. Finish the repair and refurbishing of the analytical lab in Building 33. The building is approximately half complete. The completion of this project will provide for needed lab and research related space. $350,000
- Window and Door Replacement. Install and retrofit energy efficient windows and doors throughout the Center. The present windows are approximately 40 years old and have deteriorated to the point of replacement. $290,000

Pittsburgh Research Center

- Hazardous Materials Site Investigations. Conduct further investigation of areas indicating some level of contaminants in the landfill, and initiate a ground/surface water monitoring program for existing wells and gaping stations. The Bureau has agreed to do these investigations based on the finding of contaminants. $350,000
- Electrical Modifications/Replacements. The existing electrical service to Buildings 29 and 37 is approximately 40 years, inadequate, deteriorated and becoming a fire hazard. These buildings are now used as lab space and overloading of the circuitry is common. $130,000
- Replacement of Steam Line. Deterioration to the existing Ric-Wil steam line to the Mine Equipment Test Facility is causing underground leaks and loss of steam pressure. This is dangerous because of the lack of control of the pressure and erosion to the surrounding underground. $200,000
- Replacement of Steam Line Building 23. Deterioration to the existing Ric-Wil steam line for Building 23 is causing underground leaks and loss of steam pressure. This is dangerous because of the lack of control of the pressure and erosion to the surrounding underground. $150,000

- Replacement of Manhole Covers. Replacement of electrical and steam manhole covers is required because of deterioration of steel decking, reinforcement bars, and cracking of concrete. These are documented safety hazards and the manholes do not meet OSHA regulations. $10,000

- Chemical Sinks. Rearrange the plumbing of the chemical sinks in Buildings 29 and 114. The existing drains do not drain into the sanitary sewer as required by state/local ordinances. $10,000

- Installation of Settling Sump. Install a settling sump to recover drainage from interior floor and exterior sidewalk drains adjacent to the ash silo. Coal fines and ash are entering the storm sewer from the drains in violation of permit standards. $14,000

- Boiler House Ash Conveying & Conditioning Systems. Failure to replace the existing systems may result is shutdown. The backup gas boilers produce up to 60% of the required steam. At present the Center is in violation of Federal and Local laws/regulations. $35,000

- Replace Boiler House Coal Conveyor System. The existing system is approximately 30 years old and parts must be custom made. Repairs are costly because of fabrication and actual lapse time. $150,000

- Steam Loop to METF. The facility has single feed steam distribution to the area, and no site wide emergency steam loop protection. Gas surveys indicate 7 casing breaches in the main line. If failure occurs, the facility will be left without steam, causing disruption to ongoing research and damage to the equipment in use. $200,000

- Roof Repairs. Repair the roofs of buildings 153 and 154. These are metal roofs and repairs involves cleaning, repainting with a primer coat, and a sealant to prevent further deterioration of the roofs. $75,000

- Metering Station. Install a packaged metering system at the main water line. This will provide the capability to backfeed the entire grounds, meter the usage, and provide emergency utilities to DOE. $12,000

Reno Research Center

- Replace pipes/remove asbestos. The present hot water pipes throughout the Center are more than 30 years old and frequently rupture (3 times during the past year). These pipes are insulated with asbestos. The asbestos must be removed from the hot water lines first. $700,000

- Air System. Design and install a new air system that will provide fresh air to the laboratories by the operation of exhaust hoods. This type of system will eliminate contaminated air lost through the current Lab exhaust hood systems and redistributed throughout the Center. $300,000

- Electrical wiring. This is rewiring of the Main building. The present electrical wiring is approximately 25 years old and it is more cost effective to replace the wiring rather than repair and patch existing electrical wiring. $250,000

- Annex 3. Replace the floor and drain system in the Research Test Facility. The building has settled and now the drain is the high point, therefore useless. $100,000

- Annex 2. Renovate the annex to provide sufficient space to accommodate an environmentally safe biolab equipped with the state-of-the-art instrumentation needed to conduct top quality research. $400,000

- Roof repair. The roof on the main building is leaking. This is caused by deterioration of flashing and sealant at the point that the roof meets the side of the building. $75,000

- Retrofit windows. Replace and retrofit existing windows throughout the Center. The present windows poorly fit and are not energy efficient. $150,000

- Auxiliary heating. Install new heating in the offices on one side of the building. The present heating system does not provide sufficient heat to the entire building. This is more cost effective and will reduce heating costs. $200,000

- Carpet replacement. The present carpet is in the main entrance to the facility and the Research Director's offices. The carpet is in excess of ten years old. It is worn to the point of frayed fabric and is a potential hazard to visitors and employees. $4,000

Rolla Research Center

- Water Lines. Replace the 45 year old water lines at the at the main complex, North Bishop. The lines have ruptured once during the past year. This involves removal and replacement of 500 feet of pipes, concrete drive, and parking area. $71,000
- Water Main. Replace the 45 year old water main and related lines at 900 W. 14st Street Building. This will involve removal and replacement of 541 feet of pipes and 60 feet of asphalt drive. $59,000
- Laboratory Ventilation. Install a new hood system for effective air quality control. $16,000
- Replace Electrical Wiring. Replace and upgrade electrical wiring in Buildings 6 and 7. Modifications to the original wiring over the past 35 years has created a major safety hazard. $23,000
- Electrical Wiring. Replace and upgrade 40 year old wiring and fixtures in Buildings 1,2, and 3. $53,000
- Electrical Fuse/Junction Boxes. Replace all 30 year old fuse and junction boxes in all seven buildings. $60,000
- Heating Systems. Replace and upgrade the 35 year old heating systems in Buildings 4, 5, 6, and 7. $22,000
- Hazardous Waste Building. Construct a hazardous waste accumulator building in compliance with EPA federal and state laws. $17,000

Salt Lake City Research Center

- Ventilation System. Redesign and install a system for the sample prep baghouse for the Center to meet particulate regulations. $40,000
- Solar Panel Repair. Repair of the solar panels to provide for reduction in the cost of utilities. In the past limited repairs were accomplished, resulting in delaying all necessary repairs to the system. $30,000
- Emergency Power. Connect a compressor to the emergency power to provide pack up power. $5,000
- Drying Pads. Repair leaks in the drying pads in order to use the pads effectively to their maximum. $6,000
- General Maintenance. Replace worn flooring and paint the Center. This is interior refurbishing and includes the labs. $46,000
- Parking Lot. Resurface the parking lot. $30,000

Spokane Research Center

- Heating, Ventilation and Air Conditioning Systems (HVAC). The HVAC system at the Center was a minimal system 15 years ago. Limited maintenance and no improvements has resulted in the system becoming overworked, ineffective and worn out. Maintenance costs are approximately $1,500 monthly. $100,000
- Fire Detection/Suppression System. Installation of a Class A fire detection system. The Center has been cited for noncompliance with local code. $75,000
- Rest Rooms. Construct additional rest rooms on the second floor of the Building. One set of rest rooms accommodates over 40 employees. $15,000
- Shower Facilities. Renovate the shower facilities in the shop/lab area. The present facility was installed fifteen years ago and needs to be replaced. $7,000
- Lighting. Replace the standard florescent light diffusers with parabolic light reflectors to improve lighting of interior work areas and reduce employee eye strain. $10,000

- Roof repair/replacement. The roof of the main building must be repaired. Neglect resulted in leaking and damage to ceilings, floors and equipment in the building. $100,000

- Lab hookup to city facilities. Present drainage from the Center's laboratories goes into a drywell system. The city has directed the Bureau to comply with local code and connect to the city sewer system in order to allow treatment of discharged lab wastes. $10,000

- Hazardous Materials Storage. Construct an outside storage facility for the storage of hazardous materials and provide equipment for hazardous chemicals spills. Presently, materials are stored in the labs. $15,000

- Storage facilities. An abandoned missile site 30 miles away from the Center is used for the primary storage of equipment. Access is costly and difficult when equipment is stored for short periods, and some equipment is not under shelter. A metal building is needed for storage purposes on the actual Center site. $72,000

- Security System. The present system does not provide required electronic safeguards and human resources. This is an item that the Bureau must now fund without the help of GSA because the Bureau has purchased the Facility. $50,000

- Air Stratification. Large two story laboratory bay area needs additional air handling equipment to more effectively recirculate the heat/air conditioning. $5,000

- Thermalcore Doors. Replacement of doors with insulated overhead doors for the bays. This will enhance the work area and reduce high energy costs. $20,000

- Parking Area. Replace broken and cracked asphalt in the Center parking lot. This involves resurfacing, sealing, and painting parking lines. $29,000

- Solar Window Film. Add solar film to the South facing windows of the Center to reduce solar gain during warm weather which will reduce the strain on the air conditioning system. $3,000

- Conference Room and Windows. Replace the worn conference room divider with a sound proof divider and replace the window curtains throughout the Center. $12,000

- Painting Common Areas. The common areas of the Center have not been painted in excess of five years. These areas are seen by visitors and employees of the Center. $6,000

Tuscaloosa Research Center

- Asbestos Removal. The boiler room has a ceiling made of asbestos. In addition, the main heat transfer line is wrapped in asbestos. $30,000

- Asbestos Removal. Remove asbestos from existing utility closets/chases. This may become a hazard when the utility lines need to repaired/replaced. $50,000

- Exterior of Main Building. The brick and facia on the main entrance has deteriorated to the point that it is now a safety hazard. The building is located in a historic area and must be preserved in its original state. $150,000

- Renovations. Building 4 was erected in 1948 and is used for ceramics laboratories, a photographic laboratory and storage. These renovations would create more effective utilization of space and lab facilities. $250,000

- Roof Replacement. Roof replacement on Building 5. This has been repaired three times during the past 14 months. The roof is approximately 20 years and it is more cost effective to replace the roof. $18,000

- Windows. Replace and retrofit energy efficient windows in Building 3. $7,000

Twin Cities Research Center

- Sidewalks. Repair and modify the sidewalks at the Research Center to accommodate the handicapped. $22,000

- Underground Water and Gas Lines. Replace the underground water and gas lines (500 feet). They are thirty five years old, dangerous, and costly to repair. $20,000
- High Voltage Power Lines. Replace the 30 year old high voltage power lines to the Pilot Plant. They are worn and dangerous. $46,000
- Convert Building 2 to Main Sewerage System. This building is approximately 20 years old and is now used as research labs. The building is serviced by a septic system with drain fields and is not in compliance with local code. $56,000
- Roads and Drain Tile. Wear, erosion, and damage by water have necessitated replacement of some sections of roadway at the Center. Other sections will be seal coated. $40,000
- Roof On Core Annex. This building is now being used as labs and the roof is over 25 years old and not insulated. $15,000
- Windows in Building 201. Retrofit the windows with high efficiency energy saving insulated windows. $100,000
- Main Entrance and Foyer. Replace the 30 year old single non-insulated doors and windows with efficient energy saving materials. $30,000
- Farmington Test Site. Replace seals on the elevator doors, including installation of a new heating system for the research lab at the site. $42,000
- Garage Doors. The present garage doors are 30 years old and do not protect the storage facility from weather. $20,000

Total for Current and Future Years $6,848,000

ROBCO Cleanup

Senator Byrd. The Bureau's FY 1989 request included $3.0 million to pay EPA's Superfund for what was expected to be a one-time cost for the clean-up of radioactive waste generated over 70 years by the National Radium Institute. The costs associated with the so-called ROBCO settlement escalated as EPA proceeded with the clean-up and found contaminants more widespread than originally estimated. As a result, the Bureau requested an additional $10.5 million in FY 1990 and $8.5 million was actually appropriated. How has the $11.5 million that has been appropriated to date actually been spent?

Mr. Ary. We have been billed and have reimbursed EPA $3 million for the planning and initiation of remedial action at ROBCO. We estimate that EPA has spent at least $9 million more on remediation, shipment, and disposal of the ROBCO wastes. We have requested an invoice from EPA; however, we have not yet received the invoice.

Senator Byrd. Your budget justification states that: "Since the Bureau's share of the clean-up cost has not been determined, the Administration decided to make no request for funding in FY 1991." What does this mean?

Mr. Ary. It means that when the EPA completes its cleanup efforts and knows what its final costs are and how much of the costs the Bureau is responsible for, we will request an appropriation to cover those costs. It is estimated by OMB that this will occur in FY 1993.

Senator Byrd. If the Administration has been unable to determine the Bureau's share for FY 1991, and will not know until 1993, what is the basis for your estimate of $14.0 million for the out year projections?

Mr. Ary. We originally estimated the remediation costs for ROBCO to be $25.4 million. The $14 million estimate for the out year projections represents the difference between our estimated total remediation costs and the funds that have been appropriated to date.

Geographic Information System

Senator Byrd. Your FY 1991 justification includes an increase of $750,000 to introduce a geographic information system which will be the "... principal tool for presenting data and information in all Bureau land assessment programs. The system will be designed to retrieve, integrate, and display data concerning the location, accessibility, and economic significance of mineral resources." What is the total estimated cost of this system?

Mr. Ary. The $750,000 requested will cover the initial costs of adapting the Bureau's existing Minerals Availability System (MAS) to GIS technology. Subsequent operation and maintenance costs associated with the GIS capabilities are estimated to be $300,000 per year.

Senator Byrd. Why will this system not be duplicative of land assessment systems already in place within the Geological Survey and the Bureau of Land Management?

Mr. Ary. GIS technology provides a greatly improved means of integrating many types of spatially located data from different sources. GIS aids planning activities at various levels of government and the private sector. The Bureau's GIS activities will not duplicate systems already in place or in development in other government agencies. GIS information is collected as themes or layers of information, e.g., wildlife habitats, land use, and mineral resources, which are overlaid upon a common map system such as those developed by the USGS, Central Intelligence Agency and the Defense Mapping Agency. The Bureau of Mines, as the authoritative source of information on mineral resources, can utilize this technology to provide minerals information in a standardized GIS format for use by other agencies in combining minerals data with other types of information from the Forest Service, BLM, USGS, etc.

Secretary's Stewardship Initiative

Senator Byrd. Mr. Ary, your FY 1991 General Administration budget request identifies $900,000 in support of Secretarial initiatives. You are proposing $100,000 for Take Pride in America, $500,000 for Excellence in Education, and $300,000 for Women and Minorities. How does the mission of the Bureau of Mines fit in with the Take Pride in America program?

Mr. Ary. The mission of the U.S. Bureau of Mines is to make sure that the United States has a secure, dependable supply of necessary nonfuel minerals at a reasonable economic, human, and environmental cost. This mission fits in with the Take Pride in America program because one of the goals of the Take Pride campaign is to encourage an attitude of stewardship and responsibility toward public lands and natural and cultural resources. Inasmuch as our mission makes it incumbent upon us to be good stewards of the mineral resources of the Nation, we believe there is a natural overlap between our goals and those of Take Pride in America.

Senator Byrd. The Take Pride in America program has been in existence for several years. Many agencies have been active and visible in the program. Haven't you been participating in and supporting Take Pride in America activities in the past?

Mr. Ary. The Bureau of Mines has been an active partner in the Take Pride in America campaign since it was launched in 1986. Bureau employees and offices have conducted independent activities, as well as cooperated with local, State and other Federal agencies in activities relating to the goals of Take Pride in America.

Senator Byrd. Why is it suddenly important to separate Take Pride in America from your other programs?

Mr. Ary. In the past, the Bureau has helped fund the production of public information and education materials, as well as contracts for management of public inquiries for the Take Pride in America office. Take Pride in America has now been "institutionalized", an office has been established in the Office of the Under Secretary, and several career employees have be identified to handle the day-to-day operations of the program. We feel it appropriate, therefore, to identify the continued support of the Take Pride in America campaign within the budget of the Bureau of Mines.

Excellence in Education

Senator Byrd. The $500,000 for Excellence in Education sounds like a worthy endeavor. Your budget justification on page 164 states that the $500,000 is an increase over the base. What is the total amount that the Bureau would devote to education efforts in FY 1991?

Mr. Ary. Many program activities of the Bureau of Mines contain an educational component that is difficult to quantify. Bureau offices across the Nation are adopting schools, sponsoring science fairs, and assisting individual students in exploring the realities of the work place, both through playing host to individual students and student groups during the year and through providing various types of summer employment. Elementary and secondary schools also benefit from the Bureau's highly successful film and videotape lending program. In 1989 alone, nearly 2 million students viewed over a dozen free, mineral-related films geared for the high school level. In addition, two Bureau films were shown on the Discovery Channel on cable television in 1989 to over 35 million households. The total amount of quantifiable expenditures by the Bureau for education in FY 1990 is $134,000. For FY 1991, this figure is expected to be $634,000, including the Excellence in Education initiative.

While some aspects of our Minerals Institute Program and the Bureau's participation in the Historically Black College and University Program could be considered to be educational efforts, the costs of these programs are not included in the above totals.

Senator Byrd. Haven't you been involved with educational institutions in the past and provided counsel and advice to educational institutions on such things as improving curricula and enhancing knowledge?

Mr. Ary No. We have had minimal input to educational institutions on improving curricula and enhancing knowledge at the educational levels targeted by the Excellence in Education initiative, primary and secondary schools. Bureau staff have reviewed sections of textbooks on request, supplied slides and graphs to textbook publishers, and provided technical information and statistics to outside authors. In addition, the Bureau has developed a limited selection of mineral information materials that we hope are suitable to younger students. It is primarily to focus these efforts by making our educational materials less random that we are putting forward this initiative.

Senator Byrd: Under this initiative, what would you be doing that is new?

Mr. Ary. What is new under this initiative is the elementary-school focus and the methodical curriculum planning. The Bureau will oversee the continued development of a minerals education curriculum for elementary schools that will help students: to discover the nature of mineral resources and their importance in the origin and development of society; to become aware of the role of the mineral resource sector of the economy plays in providing for our advanced technology; and to develop an appreciation and concern for the development and conservation of these nonrenewable natural resources. The curriculum would be designed in conjunction with a volunteer panel of mineral experts and educators.

Women and Minorities

Senator Byrd. Mr. Ary, the Bureau of Mines is isolating a $300,000 Women and Minorities program that should be an integral part of your regular program of work. Why aren't you at a point yet where your affirmative action program for minorities and women is institutionalized in your managers' personnel management activities?

Mr. Ary. This budget item is not for an affirmative action program for the Bureau of Mines. Such activities are being implemented in the Bureau as a matter of course. The Women and Minorities program to which this question refers is for: a career education program highlighting opportunities for women and minorities in meeting the Nation's need for minerals and the products made from them; and elements of the Excellence in Education initiative highlighting the contributions of women and minorities to the role the mineral resources industry has played in shaping political, economic, and sociological events.

Senator Byrd. Why should this be a separately budgeted item?

Mr. Ary. This item is budgeted separately because its immediate goal is distinct from those of both the Excellence in Education initiative and the agency's institutionalized affirmative action program. The Bureau would produce a videotape and supporting written materials that would highlight employment opportunities in the mineral industries, with special emphasis on opportunities for women, minorities, and the physically challenged. The materials include information on the coursework needed for pursuing careers in the mineral industries. The Bureau already has a library of videotapes in wide circulation in the Nation's schools.

Senator Byrd. What are your plans to hire women and minorities at the middle and senior levels of your organization?

Mr. Ary. A goal of the Department of the Interior and its Bureaus is to involve women and minorities as employees, especially at management levels, and program participants in an effort to reach beyond minimum equal opportunity requirements. The Bureau of Mines embraces this goal. We are committed to seeking ways to enhance recruitment, training and advancement of women and minorities, particularly in such critical professional areas as engineering, science, accounting and computer programming.

Secretarial Initiatives

Senator Byrd. As part of the budget justification explanation (page 164) for the Secretarial Initiatives which we have just been discussing, only 1 FTE and $33,000 of the expected expenditures are shown for personnel compensation. How would you spend the remaining $867,000?

Mr. Ary. While the Bureau has wide expertise and information on the role that minerals play in our daily lives, we do not have inhouse capability to create appropriate educational materials for the elementary-school level. We are looking toward tapping the expertise of education groups and teachers for actual development of curriculum materials through a contract program. Several nonprofit groups have expressed interest in participating in this activity. These organizations include the National Energy Foundation, the National Science Teachers Association, the Mineral Information Institute, and the National Education Association.

These organizations can develop educational materials by establishing working groups comprising earth science educators. The Bureau will provide information and assistance as necessary.

Once developed, the materials will be offered to the private sector for marketing and distribution.

At this stage, we are working on planning the scope of activities. By the end of August 1990, we expect to be in a position to solicit Requests for Proposals to accomplish this initiative.

Senator Byrd. Would you provide for the record a cross-cut which shows where funds for each of these initiatives would be used by specific program areas?

Mr. Ary. Yes, sir.

Secretarial Initiative Program

The Secretarial Initiatives program will be implemented and managed by the Office of Public Information. We do not anticipate that these funds will be used by other specific program areas.

QUESTIONS SUBMITTED BY SENATOR DENNIS DeCONCINI

In Situ Mining

Question: Could you provide the committee with an explanation of the status of the in situ copper mining field test at the Santa Cruz site?

Answer: The current activity at the Santa Cruz test site is the hydrologic characterization study of the ore zone. The purpose of this study is to provide design/engineering data for the field test and to provide environmental data for the Aquifer Protection Permit to be obtained from the Arizona Department of Environmental Quality. Five tests wells have been constructed in a five-spot pattern at the site. The injection and production flow rates for these wells are currently being determined. The next step in the hydrologic characterization study will be to conduct a tracer test in the five-spot well pattern. This test will provide data on the fluid flow characteristics of the ore zone, and will provide the data required to complete the environmental permit application.

Question: What activities will be accomplished in FY 1990? When will you begin flow testing of the solution through the ore zone? When do you expect to begin construction of the surface facilities?

Answer: The following activities have taken place or will take place at the Santa Cruz test site in FY 1990:

- Drilling, casing, cementing, perforating, and perforation-clean-out of five test wells that make up one five-spot well pattern has been completed. This is the well pattern in which the tracer test will be conducted, and where the in situ leach mining test is planned to be conducted.
- Water injection tests will be conducted in all five test wells to determine well flow rates. Sufficient flow rates will indicate that the well pattern is ready for tracer testing.
- Five-spot well pattern tracer testing will determine ore zone flow characteristics. This flow testing will involve the injection of a tracer solution in the center well of the five-spot pattern while pumping is conducted in the four corner recovery wells. Movement of the tracer solution to the recovery wells will be monitored with chemical analyses of the produced fluid. This test is scheduled to begin in July of 1990 and will provide design/engineering data and environmental permitting data.
- Drilling of four shallow monitor wells has been completed. These wells will be used to monitor the aquifer overlying the ore zone in order to detect the escape of leach solution from the well field.
- Drilling of one on-site water well will be completed in order to provide water for tracer testing and eventually for in situ mining demonstration test.
- Preparation of the application for the Arizona Department of Environmental Quality (DEQ) Aquifer Protection Permit (APP) will continue. Submission of this permit application is scheduled for early FY 1991. After submission of this permit application, the DEQ will require at least six months for review purposes before approval could be granted. Surface facility construction will not begin at the site until the APP has been approved. Therefore, the earliest date that the surface facility construction could begin would be May 1991.

Question: What activities would be necessary in FY 1991 to continue the project at its current schedule? What level of funding would be required to meet that schedule?

Answer: In order to continue the project at its current schedule, FY 1991 activities would require the installation and testing of three additional test wells to complete a second five-spot well pattern, installation of the large evaporation pond to handle the extra fluid production required to contain leach solution to the well field, installation of a large-radius hydrofracture to evaluate fluid flow improvement in the well pattern, installation of one additional deep well to monitor leach solution movement, environmental permitting activities associated with the above activities, and testing and commissioning the solvent extraction/electrowinning plant. The total funding required for these FY 1991 activities is $4,350,000.

Question: Could you provide a breakdown of the major costs for this level of funding?

Answer: The breakdown of costs for these activities are as follows:

Installation and testing of three test wells	$1,500,000
Installation of large evaporation pond	465,000
Installation and testing of hydrofracture in well field	503,000
Installation and testing of deep monitor well	409,000
Environmental permitting activities for the above	162,000
Testing and commissioning of plant	361,000
Closure and restoration of site if project is not continued	200,000
Related in-house activities	750,000
Total	$4,350,000

Question: In FY 1988, the committee, in Report language established a federal/nonfederal cost sharing arrangement at 75%/25% for the life of the project and it is my understanding that several contracts have been signed consistent with that arrangement. Would the Bureau agree that we should continue with that arrangement? Also, it is my understanding that it is the Bureau's intent to encourage cost sharing arrangements on research projects, and have testified in past years that the in situ cost sharing arrangement could be a model for Bureau programs. Do you see value in maintaining this arrangement as an encouragement for other similar programs?

Answer: The Bureau still contends that this project should be 100 percent funded by industry. However, if Congress desires that this 75%/25% federal/non-federal cost sharing arrangement should continue, the Bureau has no objection. It is possible that cooperation with industry under a program such as this will encourage additional cooperation in the future.

Question: What would the additional non-federal share be in FY 1991 assuming this level of funding were provided by the Congress?

Answer: The total required funding for FY 1991 to keep the project on schedule is $4,350,000. The non-federal share of this amount (25 percent) is $1,087,500.

Question: Could you please provide a summary of the activities and accomplishments of the Bureau's in situ related laboratory research program? What research, test, and management activities will be required in FY 1991 if funds are provided to continue the field test at its current schedule?

Answer: Extensive laboratory core leaching and geologic characterization experiments are yielding valuable information about the test site. To date, significant copper recoveries from laboratory experiments have been obtained and warrant continuation of the actual field study.

An effort is currently underway in the preparation of a public meeting to be held in Casa Grande, Arizona on July 25, 1990. This public meeting is a critical milestone for the project and is part of the Government's National Environmental Policy Act (NEPA) requirements. After the meeting, the Bureau will be required to prepare an Environmental Assessment which addresses all of the issues brought forth by the public and any additional issues identified by the Bureau to determine whether the project will result in a significant effect on the human environment. This activity will require a significant research effort on the part of the Bureau well into FY 1991.

The Bureau will require hydrologic data from the test site in FY 1991 to evaluate the ability to inject and control fluids within the ore zone. For this purpose, the Bureau intends to drill at least one deep monitor well at the site in order to collect the necessary hydrologic data to develop computer models for understanding the site hydrology.

Field test and construction of the surface facilities in FY 1991 will require a significant amount of time and travel for Bureau personnel to oversee the work and to ensure that the research project is conducted in a timely and efficient manner.

The above in-house activities will be required in FY 1991 in order to keep the field project on schedule. These activities will require in-house funding of $750,000.

Question: What is the status of the environmental assessment process? Are public meetings scheduled?

Answer: The Bureau is preparing an Environmental Assessment document for this project in order to meet the requirements of the National Environmental Policy Act. Geologic and hydrologic data being collected at the site is being used in preparation of the Environmental Assessment. To provide for public involvement in the Environmental Assessment, a public meeting has been scheduled for July 25, 1990, in Casa Grande, Arizona to provide information about the project to the public, to answer questions about the project, and to solicit input about environmental issues regarding the project that the public would like to have addressed in the Environmental Assessment document. The Draft Environmental Assessment document is scheduled to be completed by about mid-FY 1991. When the Environmental Assessment is finalized, a decision will be made as to whether an Environmental Impact Statement is necessary or whether the project may immediately proceed.

QUESTIONS SUBMITTED BY SENATOR DALE BUMPERS

Soil Conservation Service Study

Question: In your FY 1991 Budget Justification to Congress you propose a decrease of $4 million in the research account for environmental technology. Yet, the goals of the program, "providing the Nation with the knowledge and technology needed to reduce environmental problems while ensuring an adequate supply of minerals from domestic resources," are crucial at this point in time.

A total of $750,000 has been appropriated to the Bureau of Mines, to date, for an on-going study by the Soil Conservation Service in Arkansas on identifying plant species that are best adopted to reclamation of abandoned mine lands. The study is intended to be a five year effort and a work plan has been developed by the Department of Agriculture, Soil Conservation Service to implement the program. Furthermore, a memorandum of understanding has been completed to define respective agency responsibilities. However, the FY 1991 budget does not request funding for this study. What is the progress of the study to date?

Answer: The study is beginning its third year of effort. To date the progress has been steady and should start to yield results within the next year. A recent review at the sites was conducted and the working relationship between the SCS and the Bureau of Mines has been strengthened. We expect the final results to complement our own research in related areas.

Question: I fully support the continuation of this study and I intend to make a request for funds to complete it. How much will be necessary a year for the next two years to carry out the plan and the MOU developed by the Bureau with SCS and Arkansas Tech?

Answer: A funding level of $250,000 per year is estimated to be adequate.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

General Budget

Question: Your FY 1991 budget request of $146,412,000 is an improvement over your FY 1990 request, and I commend you for this small increase. However, it is nearly $30,000,000 under the actual FY 1990 appropriation. While this pattern is similar to previous years, I find it curious that your requested reductions from the FY 1990 enacted level are not spread evenly across-the-board. In particular, under your Mines and Minerals Appropriation, why are you asking for a $4,550,000 increase for Information and Analysis while the other important activities such as Research (including Health, Safety and Mining Technology) and the Mineral Institutes are slated for major reductions? (pp.14-16)

Answer: The Information and Analysis upgrade increase that you refer to does represent the most critical program requirement in the Bureau today. That is not to say that we don't have other very important programs included in our request to you.

Over the past decade we have been in the unenviable position of seeing our budgets decrease while other fixed costs such as payroll and rent continued to rise. In light of this constant erosion of our purchasing power we consistently postponed necessary improvements to our computer system in order to maintain the Bureau's critical mass of employees and programs. In FY 1991 we decided to make the commitment necessary to bring our automated systems up to the standard of the other data collection agencies in government and deliver the service demanded by our clients, the Congress, the Executive Branch and the minerals using public.

Question: Does this infer that computer systems and statistics are more important than mine safety, environmental protection, and education?

Answer: No, computer systems are not more important than our other programs. All of the programs of the Bureau are important to the nation. Computer systems happen to be the program most in need of support at this time.

Columbia Plaza Headquarters

Question: Last year you testified that your headquarters at Columbia Plaza had been condemned, and that you would be moving out of that building in July 1990. What is the status of your headquarters relocation?

Answer: We expect the relocation of the headquarters to begin late in fiscal year 1991.

Question: Are your still located at Columbia Plaza?

Answer: Yes, we are still located at Columbia Plaza.

Rental Payments to GSA

Question: Included in your adjustments to your base budget on page 17 of your budget justification there is an increase of $2,414,000 for "Rental Payments to GSA" for increased costs payable to GSA resulting from higher rates for office and non-office space. In light of the fact that the EPA has listed this building as one of the ten worst buildings for air quality in the nation, I certainly hope that GSA is not increasing its fees. Is any of this increase intended for your Columbia Plaza headquarters building here in Washington?

Answer: Yes. Based on 4.4 percent increase in Rent rates forecast by the General Services Administration $36,000 is included to cover the increased charges for the 1 quarter we projected we would be in Columbia Plaza.

Policy Analysis

Question: Under the terms of the U.S.-Canada Free Trade Agreement, both governments will examine specific subsidies provided to various industries, evaluate their competitive impacts, and recommend measures to reduce or eliminate them. How will the Bureau of Mines participate in this endeavor with respect to minerals trade between the two countries?

Answer: The Bureau of Mines represents the Interior Department on the interagency U.S. delegation of the Chapter 19 Working Group which has met twice; once in November 1989, in Washington, D.C. and again in May 1990, in Ottawa, Canada. The Chapter 19 Working Group on Subsidies is a U.S. - Canadian negotiating group that was established under the U.S. - Canada Free Trade Agreement (FTA) to address and resolve the problem of governmental subsidies in both countries by 1996. The Department of Commerce chairs the U.S. delegation to the Chapter 19 Working Group. The Bureau will continue to participate in the efforts [illegible] the Chapter 19 Working Group on Subsidies and estimate the respective impacts of subsidies on minerals trade.

The Bureau of Mines is also a member of the Section 409(b) Committee which is chaired by the Office of the United States Trade Representative (USTR). The Section 409(b)

Committee reviews petitions filed on behalf of U.S. industries under Section 409(b) of the U.S. - Canada FTA and makes recommendations to the USTR. Industries can petition the USTR if they believe their competitive position will deteriorate due to competition from subsidized Canadian imports before rules regarding government subsidies can be negotiated by the Chapter 19 Working Group on Subsidies. In April 1989, a petition was filed on behalf of the U.S. copper, lead, and zinc industries. The Bureau, and other members of the Section 409(b) Committee reviewed the petition and advised the USTR, who in July 1989, identified the U.S. copper and lead industries as industries facing potential injury from subsidized Canadian imports. The USTR decision entitled the copper, lead, and zinc industries to request information from the USTR about Canadian government subsidies. On May 9, all three industries requested the USTR to provide them with information about government subsidies to their Canadian competitors. The Bureau will continue to work with the USTR as a member of the Section 409(b) Committee or any other interagency committee established by the USTR to address U.S. - Canadian subsidy issues.

The Bureau of Mines has reviewed subsidies proposals submitted by both the U.S. and Canada to the General Agreement on Tariff and Trade (GATT) during the current Uruguay Round discussions. The Bureau will continue to review and monitor future U.S. and Canadian subsidies proposals, as well as the final subsidy agreement reached by the GATT in December 1990. Any agreement reached by the GATT will be a reference point for bilateral subsidy talks between the U.S. and Canada.

Question: Which minerals are most widely traded between the U.S. and Canada?

Answer: Canada's major mineral exports to the United States are: crude petroleum, natural gas, aluminum metal and alumina, copper metal, iron and steel, zinc metal, uranium, cement, lead metal, peat, gypsum and plaster, sulfuric acid, limestone and coal. Canada's major mineral imports from the United States are: crude petroleum, aluminum metal, coal, copper scrap, clays, platinum group metals, phosphatic fertilizers, cement, chromium, iron and steel, lead scrap, gravel and crushed rock, uranium, zinc metal and zinc scrap. The following table provides specific data on widely traded minerals:

CANADIAN EXPORTS AND RE-EXPORTS[1] TO THE U.S.
1988: VALUES IN THOUSANDS
INTERNATIONAL MONETARY FUND AVERAGE: $1CAN = $.8125 U.S.

PRODUCT	$CANADA	$U S
Alumina	1,471	1,195
Aluminum unwrought	2,171,836	1,746,617
Cement	143,270	116,407
Coal, including lignite	11,540	9,376
Copper unwrought	590,441	479,733
Pig iron, granules	74,116	60,219
Steel, primary	37,595	30,546
Lead unwrought	105,853	86,006
Natural uranium, cmpds	364,409	296,082
Zinc unwrought	573,464	465,940
Gypsum & plaster	58,229	47,311
Gas, natural	2,928,937	2,379,761
Limestone	5,917	4,808
Sulfuric acid	28,226	22,934
Peat	87,253	70,893
Petroleum Crude	3,924,372	3,188,552
Total	11,106,929	9,006,380

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[1] Re-exports are exports of material not originating in that country and not having been significantly altered while in that country.

CANADIAN IMPORTS FROM THE U.S.
1988: VALUE IN THOUSANDS

PRODUCT	$CANADA	$U S
Clays, crude	98,339	79,905
Cement	29,524	23,990
Platinum-group metals	55,695	45,255
Copper waste and scrap	139,099	113,024
Aluminum metal (all forms)	1,100,575	894,267
Lead waste and scrap	14,087	11,446
Petroleum, crude	2,823,673	2,294,363
Uranium, natural & cmpds	7,873	6,397
Zinc waste and scrap	1,983	1,611
Zinc metal (unwrought)	5,640	4,583
Iron and steel (primary forms)	13,088	10,635
Chromium (ferrochromium)	13,212	10,735
Gravel and crushed rock	9,331	7,582
Phosphatic fertilizers	44,304	35,999
Coal, including lignite	727,230	590,908
Total	5,083,653	4,130,700

Question: What level of funding have you requested in your FY 1991 budget for this activity?

Answer: The Bureau's 1991 budget request includes $250,000 for this activity.

Regulatory Compliance Costs

Question: Regulatory compliance costs affecting the U.S. mineral industry are excepted to increase in the early 1990s. Such increases may further erode the ability of the domestic firms to compete with foreign producers who are subject to similar government controls. In this regard, it is my expectation that the enactment of Clean Air legislation this year will greatly increase the promulgation of the air pollution regulations over the next few years. Is the Bureau prepared to analyze these regulations and offer reasonable alternatives if necessary?

Answer: Yes, the Bureau of Mines regulatory program is structured to focus on legislation and rulemaking activities affecting the mining and minerals processing industries and to assess the competitive and economic impacts and to develop cost effective alternatives. Recent Bureau regulatory analyses have examined the potential impact of acid rain legislation on the domestic aluminum, silicon and ferrosilicon industries; the regulation of nonasbestiform amphiboles; and the impact of existing and proposed regulations on the domestic lead industry. An analysis nearing completion will assess the impact of regulating aluminum spent potliner as a RCRA hazardous waste, identify the implications for energy recovery and indicate alternative actions.

Question: Do you expect this activity to be financially burdensome during FY 1991, and are there sufficient funds in your budget to cover these costs?

Answer: The monitoring and analysis of clean air legislation and rulemaking activities will present an addition to the Bureau workload. So far, the Bureau's work has focused on the impact of acid rain-related provisions on the aluminum industry. If necessary the Bureau will reallocate resources to this important area.

Question: Which minerals industries do you expect to be hardest hit by the clean air act amendments, and how will that affect this Nation's security?

Answer: Severely impacted mineral industries will include steel (coke ovens and electric arc furnaces), copper smelters, primary lead smelters and secondary lead smelters. The industry could be forced to close its U.S. coke based steel operations that produce 60% of U.S. steel. Mineral fibers are included in the list of toxic chemicals and the control for these emissions could affect the glass wool, rock wool and related industries.

Geographic Information System

Question: You are requesting an increase of $750,000 for the Geographic Information System (GIS) under your Policy Analysis Program for FY 1991 (p. 40). The system will be designed to retrieve, integrate, and display data concerning the location, accessibility, and economic significance of mineral resources. Please explain how this system will also be of value to the Forest Service (FS) and the Bureau of Land Management (BLM) in their land use allocation activities.

Answer: Geographic Information Systems (GIS) technology provides a greatly improved means of integrating many types of spatially located data from different sources. GIS aids planning activities at various levbls of government and the private sector. The BLM and FS have major GIS efforts underway to collect geographically referenced information on the lands that they manage. This information is collected as themes or layers of information, e.g., wildlife habitats, land use, and mineral resources which are overlaid upon a common map such as those systems developed by the USGS, Central Intelligence Agency and the Defense Mapping Agency. The Bureau of Mines is the Federal government's source for information on mineral resources. By providing mineral resource information in a standardized GIS format, Bureau information will be readily combined with other types of information from other Federal and state agencies. The Bureau coordinates its activities through participation on the Interior Digital Cartographic Coordination Committee, or IDCCC.

Question: Is this a one-year need, or will additional funds be needed in future years to complete this project?

Answer: Additional funds will be required in future years to maintain GIS capabilities. Projected needs are estimated to be $300,000 per year.

Land Assessment

Question: The Bureau has carried out mineral assessments on roadless areas in Idaho in FY 1989 and FY 1990 (p. 57). In FY 1990, Congress appropriated $1,200,000 for the second year of this projected four year program. What information has come to light through these assessments, and have the Forest Service and BLM been able to take this information into account in their decision-making processes?

Answer: Based on preliminary data, the Bureau of Mines has identified portions of six of the nine roadless areas studied in FY 1989 as having sites of significant mineralization. Gold in placer and/or lode (hard rock) deposits is the principal commodity occurring in these areas. Silver usually accompanies the gold and could be recovered as a co-product or byproduct of any future mining operations. The Bureau of Mines field personnel working on these studies maintain close cooperation with local Forest Service staffs who are routinely informed concerning our findings. The Forest Service will also be provided copies of all reports upon completion (no BLM lands involved in these studies).

Question: What are your plans for further land assessments in Idaho during FY 1991?

Answer: In FY 1990, work will continue on the Trinities, Secesh, and Smokies areas and will begin on the Mallard Larkins/Clearwater, Kelly/Cayuse/Cook Mountain, Red Mountain, and Sawtooth Additions (Black Warrior and Hanson Lakes). The field work is scheduled to begin in June, depending upon the weather. In FY 1991, work will continue on four roadless areas and will begin on up to nine additional areas having a high potential for mineral resources.

Question: Are funds for these activities included in your FY 1991 budget request?

Answer: The Bureau's FY 1991 budget request includes $1,200,000 for further land assessments in Idaho.

Mineral Commodities

Question: Your FY 1991 request for Minerals Commodities includes a $250,000 increase for the establishment of a Advanced Materials Branch (p. 68.) This branch will work on data bases on advanced materials production and use, and on the structure of the advanced materials industry, begun during FY 1989 and FY 90. Reports on advanced materials and advanced materials issues will be prepared to be published in regular Bureau publications under this program. What is this program's relationship to the Office of Advanced Materials Coordination which was established in FY 1987?

Answer: The staff and work of the Office of Advanced Materials Coordination has been transferred to the Division of Mineral Commodities and has become a part of the new Branch of Materials.

Question: Will there be any overlapping of responsibility between the Office of Advanced Materials Coordination and the proposed Advanced Materials Branch?

Answer: There will be no overlapping of responsibility between these two entities, as they are one and the same. The functions of the Office of Advanced

Materials Coordination will continue within the Branch of Materials and the coverage area will be expanded to include other "Materials" in addition to "Advanced Materials."

Question: What are your long-term plans for your Advanced Materials Program? (p. 68)

Answer: The Materials activity entails data gathering and analysis of the overall input, flows, and discards of nonrenewable resources in our domestic economy from an industrial sector and national perspective. Additionally, this activity provides for the collection and analysis of data on non-fuel organic based materials and advanced materials. Material Application reports on the construction, and electronics industry will be completed in FY 1993. Work in future years will address the consumer goods, industrial machines, and coating/sealants industries. Transportation analysis will be expanded with initiation of a study of the aviation industry in FY 1993. Informational publications, data-base access, and presentations will continue to address the status of the domestic industry in the global material marketplaces, especially with regard to cost competition, technologies, and processing capacity assessments. Impact studies will also address the efficiency of the domestic and world materials industries as they relate to sustainable economic concepts, the environment, and developing third world countries.

Statistics and Information Services

Question: For your Statistics and Information Service subactivity, you are requesting a 35 percent increase of $2,000,000 (p. 75). While I understand the need to provide readable and timely publications and information to the public, how can you justify such a large increase at this time?

Answer: Due to budgetary limitations over the years, the Bureau has been unable to keep up with the changing technologies in information systems. A substantial increase of funds is required in order to bring systems up to a satisfactory level and maintain them in the future. In the past, budget cuts that had to be absorbed usually were at the expense of our supporting systems. Some problem indicators of the state of affairs are as follows: high personnel turnover rate; unsatisfactory publications distribution; fragmented computer systems; archaic work processes; little budget for needed revitalization of technology, equipment, and resources; survey response rate decline. Recent studies by both private contractors and the Office of Personnel Management have recommended significant changes and a major upgrade of our support systems. The required funds reflect the recommendation of these studies. The upgrade will result in shortened survey processing time, reduced paperwork, and improved productivity in data collection and dissemination.

Question: What are the funding requirements for the next five years for this program?

FY 92	FY 93	FY 94	FY 95	FY 96
$7,203,000	$7,028,000	$6,878,000	$5,696,000	$5,696,000

Question: Will this significant outlay of funds lead to actual cost savings in the future? If so, how?

Answer: We expect major savings to accrue from elimination of USGS mainframe ADP charges as the applications are converted to in house minicomputers. Additional savings should be realized in personnel costs as the systems are automated. For example, changing the Bureau's Minerals Yearbook publication process from a labor-intensive in-house system to a contractor supported electronic publication system has resulted in significant savings. Furthermore, this streamlined process will allow Yearbook reports to reach the readers earlier. Savings should also accrue from reduced printing costs due to electronic bulletin boards, desktop publishing, and electronic survey techniques.

Although it is difficult to predict with a degree of accuracy what the total amount of savings would be, we anticipate that it would be sufficient over time for us to utilize in maintaining the level of currency of our equipment and technology. By keeping our technology and equipment current, we eliminate the problem of falling into obsolescence, which would require an even greater infusion of resources to bring it up to par.

Research

Question: In recent years, the U.S. mineral industry has found it increasingly difficult to compete for a share of world markets. Many foreign producers benefit from lower production costs and higher grade deposits. Some foreign governments subsidize their mineral industries and impose fewer restrictions with respect to environmental controls and health and safety regulations. On page 79 of your justification, you indicated that "If the United States is to compete in world mineral markets, innovative technology must be found to lower the costs of recovering and processing minerals." However, by the looks of your total FY 1991 request for research, which is a reduction of almost $23,000,000 from your FY 1990, your comments regarding the need to find new and innovative ways in which to compete appear to be nothing more than lip service. Would you care to comment on that observation?

Answer: In light of the need to continue reducing the Budget deficit, the Administration must balance the need for innovative mining technologies with the need to reduce the deficit. However, the Bureau continues to have an aggressive research program that is pursuing innovative technologies. This effort includes computer-assisted mining, in situ mining of copper and manganese, borehole slurry and other methods to economically mine low grade deposits. It also includes significant research in designing underground mines in hazardous rock conditions so that present mines can produce minerals more efficiently and safely. The Bureau has initiated studies to determine how minerals can be recovered in Alaska since it contains important platinum, chromium, and manganese deposits. The majority of the reductions are completed research projects or Congressional add-ons from previous years.

Health, Safety and Mining Technology

Question: On page 81 of your FY 1991 budget justification, you indicate that as a result of the $729,000 reduction due to P.L. 99-177, research in all program areas will be stretched out, resulting in delays in obtaining research results.

I am somewhat perplexed why a $729,000 reduction in an activity which received a $55 million appropriation in FY 1990 would impact each and every one of your research programs to the extent that they will all be delayed.

I also notice that your FY 1991 request represents nearly a $17 million reduction from your FY 1990 appropriation. On page 82 of your FY 1991 budget justification you state that "Bureau research will provide the U.S. mining industry with technology to help reduce accidents and injuries through the safe, efficient, and enhanced use of its human resources -- the industry's and the Nation's most valuable resources." I interpret this to mean that you believe your FY 1991 budget request to be adequate to achieve the objective. Please explain to the Subcommittee why a $729,000 reduction will have more of a negative effect on the operation of this subactivity than your proposed $17 million reduction for FY 1991?

Answer: The $17 million reduction will result in termination of specific projects in various program areas. This reduction is not an across-the-board decease. The $729,000 reduction will be spread across-the-board, and, thus, will affect all program areas; however, the impact will be relatively minor.

Occupational Health

Question: The Federal Mine Safety and Health Amendments Act of 1977 established maximum noise exposure levels so that workers could be exposed to noise for an eight-hour shift without suffering hearing damage. In many cases, noise levels in underground and surface mining operations are now so high that many mining and processing operators can meet Federal standards only by reducing the worker's exposure time. Such reductions often involve production losses. What research on this subject is currently underway, and how much funding will be expended on this activity during FY 1990?

Answer: The ongoing noise reduction research efforts include: (1) studies of in-mine noise reduction provided by personal hearing protection devices worn by miners, (2) investigations of impact noise-generating mechanisms and the radiating characteristics associated with them, (3) developing an acoustical model to analyze noise levels at various worker locations so quieter mining environments may be created for operators, and (4) technology to effectively reduce mining auxiliary fan noise. Funding expended for these programs during FY 1990 is $829,000.

Question: What level of funding are you requesting for FY 1991 for this research?

Answer: The Bureau has requested $341,000 for noise research during FY 1991.

Question: When do you expect that the major problems in this area will be solved?

Answer: Within the next 5 years, we anticipate developing technology to mitigate several noise problems in the mines including:

- a methodology for objectively assessing the field performance of personal hearing protectors by 1991.
- noise cancellation technology to reduce noise from auxiliary fans in mines by 1993.
- an acoustical model to predict and analyze occupational noise exposures by 1995.
- a basic research approach to investigate noise-generating mechanisms and radiating characteristics associated with impact noise sources by 1995.

Emphasis will be placed on cooperative efforts with manufacturers and suppliers to facilitate the use of new noise-control technology in equipment designs.

Ground Control

Question: In FY 1990, Congress provided a $1 million increase for continued rock burst research. Please provide the Subcommittee with an update on efforts to eliminate these dangerous hard rock hazards.

Answer: A multi-stope microseismic rock burst detection system was completed at the Galena Mine, Wallace, Idaho, under a cost-sharing agreement with ASARCO, and is now collecting data around the clock. Technical advances made in hardware permitted linking eight single systems into a high-performance network that functions as a single system. Results from further investigations should enhance this multi-stope monitoring system at the Galena Mine and aid in identifying the potential for rock bursts for the mining industry in general.

With the mines in the Coeur d'Alene Mining District approaching depths that require significant rock burst control improvements to reduce or avoid catastrophic ground hazards, Bureau investigations into rock mechanics source mechanisms are an essential step toward developing new mining strategies to pursue these rich deposits. The Bureau was successful in designing a macroseismic system that confirmed that slips along faults and bedding planes are the mechanism for increasingly common rock bursts in the area. Research efforts are underway to improve the accuracy of the system in defining geologic structures and providing mitigation techniques for the rock burst hazard.

Question: How much of the FY 1990 appropriation will be used at the Spokane Research Center?

Answer: Of the $1 million increase provided by the Congress for rock burst research, $500,000 was designated for projects conducted at the Spokane Research Center.

Question: What level of funding are you requesting for rock bursts in your FY 1991 budget request?

Answer: The requested funding for rock burst research during FY 1991 is $1.4 million.

Question: Is this a reduction from your total FY 1990 appropriation? If so, by how much?

Answer: The requested FY 1991 funds for rock burst research are $400,000 less than the final FY 1990 appropriations.

Mine Disaster Prevention

Question: A major mine fire or explosion can result in a mine having to be sealed for extended periods of time, if not permanently. The monetary loss in production and/or reserves can be considerable, and based upon the incident trend over the past ten years, mine disasters from 1990 through the year 2000 could cost the mining industry as much as $1.2 billion.

Your FY 1991 budget request for Mine Disaster Prevention represents a $2,550,000 reduction from your base (p. 102). In light of the loss in revenues to the Federal Government that will occur over the next decade in the event that the mining industry actually incur losses of $1.2 billion, shouldn't extra attention and funding be given this program? Has the Bureau ever estimated the potential loss to the Federal Government if mine disasters over the next ten years cost the industry $1.2 billion?

Answer: The technology already developed by the Bureau can help the mining industry reduce its losses from mine disasters considerably. Transfer of existing technology to the mining industry is a high priority of the Bureau. The Bureau has not estimated the potential losses to the Federal Government from mine disasters, only to the mining industry itself.

Question: Your budget justification indicates that the high level of funding for this activity in FY 1990 allowed completion of a number of tasks in these areas ahead of schedule and reduced the funding requirements for FY 1991 (p. 102). Please provide the Subcommittee with a list of these completed tasks.

Answer: Completed tasks are as follows:

Belt-Wearable SCSR
Sheathed Charge
Ultra-Low Frequency Electromagnetic Fire Warning Alarm
Rock Dust Meter
Conveyor Belt Flammability Test

Minerals and Materials Science

Question: Scrap generated during manufacturing processes and scrap from worn-out, obsolete, or otherwise discarded machinery and equipment are valuable sources of metals, especially of imported strategic and critical metals. At present, the United States exports many kinds of scrap and waste materials for metal recovery abroad, because processing facilities do not exist in the U.S. (p. 116). What obstacles prevent the U.S. from developing an efficient, cost-effective scrap industry?

Answer: For many materials, the U.S. has an efficient and cost-effective scrap industry which provides essential raw materials for most of the minerals industries. In some cases, however, the best, or only, market for the scrap collected is in other countries. An example is the automotive catalytic converter. Most of these devices are removed from automobiles when they cease to function or when the car is scrapped. Although an industry exists to collect these converters, there is only one company in the U.S. currently treating them to recover the platinum group metals. The result is that about 80 percent are exported, primarily to Japan. In this example and for other forms of scrap, a primary problem appears to be the lack of low- cost, low-risk technology to invest in. The scrap industry is a collection of independent companies that do not maintain research groups to develop this technology. The Bureau of Mines is the largest research organization in the U.S. with a research program in this field.

Question: When will the U.S. scrap industry be viable?

Answer: The U.S. scrap industry is viable today. Recycled metals are an essential feed source for virtually every metal. The Bureau's primary concern is that many potential forms of scrap are not handled, either becoming waste products or being exported, due to a lack of suitable treatment methods available to the current scrap industry.

Question: What funding level is proposed for scrap recovery research in your FY 1991 budget request?

Answer: The Bureau's budget request in FY 1991 includes $1,621,000 scrap recovery research.

Idaho National Engineering Laboratory

Question: The Congress provided you with $1,000,000 for minerals and materials science in FY 1990 to continue strategic and critical minerals research at the Idaho National Engineering Laboratory. If my memory is correct, this money was not requested in your FY 1990 budget. Does your FY 1991 budget request include funding for this program?

Answer: In FY 1990 Minerals and Materials Science supported $4,000,000 of Strategic and Critical materials research at the Idaho National Engineering Laboratory, including the $1,000,000 provided by the Congress. The $1,000,000 provided by Congress supported research that is being terminated either because we believe it has reached a point where industry can begin technology development or because the work has not been successful.

Oregon Metal Initiative

Question: In FY 1990, the Congress increased Minerals and Materials Science by $1,000,000 for the Oregon Metals Initiative. This program was envisioned as a

$5,000,000 project that will be spread over three years. Does your FY 1991 budget request include funding for this program?

Answer: No, our budget request does not include funding for the Oregon Metals Initiative. Congress passed the Bureau's FY 1990 appropriation (with the $1,000,000 added on for this program) after our FY 1991 budget estimate was sent to OMB. Therefore, we did not have OMB approval to request FY 1991 funding for the Oregon Metals Initiative.

Parenthetically, arrangements for non-Federal matching funds have been made through the State of Oregon, and spending of the FY 1990 appropriation is expected to begin by the end of June.

Control of Mine Drainage and Liquid Waste

Question: The potential for contamination of surface and ground waters through discharge or seepage of water from mines and mineral processing operations or runoff from solid wastes is one of the most significant environmental issues facing the minerals industry.

The increased use of cyanide to process previous metals is creating a new environmental problem (p. 138). Animals and migratory birds are attracted to impounded waters in arid areas and may be poisoned. Furthermore, leakage from beneath heap leaching pads and subsequent migration of cyanide through the soil to ground waters, and the lack of scientific data concerning the long-term stability of cyanide compounds are all cause for alarm. What efforts are currently underway to solve these problems?

Answer: The Bureau of Mines through in-house research and research at the Generic Center for Minerals Industry Waste Treatment and Recovery initiated a comprehensive research program in FY 1988 and expanded the program in FY 1989 and FY 1990 to address the environmental problems of cyanide leaching. Research efforts under this program address several areas that have been identified by the Bureau, regulatory agencies, and industry as priority environmental issues.

Through this combination of in-house and university research, we are evaluating currently used methods for destroying, neutralizing, and recycling cyanide contained in leach and tailings ponds, primarily for wildlife protection, and conducting research to develop more effective technologies. Research is focusing on cyanide destruction and on using new processes to concentrate and recycle cyanide so that the cyanide concentration in large areas, i.e., multiple acre ponds, is kept at levels that are non-toxic to all wildlife.

Cyanide heap leaching operations usually employ clay or synthetic liners to contain and prevent leakage of cyanide and gold containing solutions. Through university research, the Bureau is studying the migration of cyanide through clay liners and the use of additives to the liners to inhibit migration and/or destroy and attenuate cyanide migration. Through in-house research, the Bureau is investigating the use or organic additives beneath either clay or synthetic liners to adsorb or react with cyanide to prevent its escape. This research is to offer further assurance and protection against potential contamination of water resources.

The Bureau of Mines, with partial industry funding, is conducting research to develop and evaluate chemical leachants that can be used as more environmentally acceptable reagents for leaching gold ores.

Another research effort is directed at developing chemical and biochemical processes to ensure that cyanide is rinsed or destroyed in spent heap leach and mill tailings wastes. One recent scientific breakthrough is the isolation and culturing of bacteria that can convert cyanide to non-toxic carbon and nitrogen compounds. The bacteria have been shown to be active for concentrations of cyanide up to 300 ppm and will be applicable to most heap leach operations. A Memorandum of Agreement with a heap leaching mining company is in progress to field evaluate this new process. Other research involves active cooperation with industry to sample and characterize the cyanide levels and cyanide species present in operating heaps and in leach wastes, included wastes from closed operations.

Finally, in a cooperative effort with industry and EPA we are attempting to document current state-of-the-art knowledge and technology of cyanide, including its chemistry, toxicology, waste management and control, and short and long-term environmental impacts. Experts from industry, universities, Federal and state governments and environmental groups are being asked to participate in workshops for this purpose. The publications resulting from this effort will provide information pertinent to industry for waste management control, Federal and state regulatory agencies for developing standards for leach operations, and universities and government agencies to set priorities for research.

Question: Is there an estimate of how many gold mines employing cyanide leaching are in operation on Federal lands in the U.S.?

Answer: We estimate from information provided by the Forest Service and the Bureau of Land Management that there are approximately 200 cyanide leaching operations on Federal Lands in the U.S.

Question: Will the number of cyanide leaching operations continue to increase?

Answer: We all know that mining has historically been a cyclic industry. As long as gold remains at $350 per ounce or higher, it can be anticipated that the number of cyanide leaching operations will continue to increase. However, when a cost-effective and environmental acceptable alternative to cyanide is developed, the number of cyanide leach operations may actually decline, while domestic precious metals production increases.

Question: What amount of funds will be expended in FY 1990 on cyanide leaching research, and how much are you requesting in your FY 1991 budget request?

Answer: The Bureau is spending approximately $1.25 million in FY 1990 for leaching research, including approximately $0.5 million to find an alternative to cyanide. In addition, projects totaling about $250,000 are funded at universities through the Generic Center for Waste Treatment and Recovery. This research program was developed in FY 1989 and FY 1990. The same level of funding is planned for FY 1991, and we are negotiating with industry to cost share research in the areas I've discussed in order to expand and accelerate the research.

Mineral Institutes

Question: Although your FY 1991 budget request for the Mineral Institutes represents a decrease of $5,762,000 from your base, I want to commend you for including this item in your budget this year (p. 152). You may recall that at last year's hearing I asked whether you supported the institutes, and you said that you did. I am pleased to see that you have succeeded in getting this request past OMB. What are your long-term plans for this activity, and can we expect to see it in future budget requests?

Answer: Our long-term plans are to encourage the interaction between mineral institute basic research and Bureau of Mines applied research to try to utilize developments for the long term benefit of the industry, workers, and the public. Budget requests are determined on the basis of needs each year.

Question: It is my understanding that this program is a partnership with industry and universities. Is there a specific dollar match that must be achieved before Federal funds can be released?

Answer: By law allotment grants must be matched on the basis of two non-federal dollars for each Federal dollar. Local dollars may be from industry, state, or other private sources. No matching is required for the funds which support the generic mineral technology centers; however, the availability of matching contributions is viewed positively in making choices as to what research is to be supported.

General Administration

Question: Under your General Administration activity, both your FY 1991 base and FY 1991 request for Automatic Data Processing represent a reduction of $2,423,000 from your adjusted FY 1990 appropriation (p. 160). While I commend you for this decrease, I was wondering why this computer related item is being reduced while your other computer requirements - especially those under your Information and Analysis activity - are being rapidly increased. Could you please explain this to me?

Answer: The reduction in the Automatic Data Processing funding for FY 1991 of $2,423,000 is a result of a one time obligation in FY 1990 of $750,000 for the acquisition of a distributed minicomputer network and conversion of mainframe application systems to mini/microcomputer processing in the amount of $2,441,000. In FY 1991, $594,000 will be needed to complete the conversion. The net decrease in funding for these items is $2,597,000. The remaining difference of $174,000. ($2,597,000 - $2,423,000) is an increase due to pay raise requirements and additional data processing support for the General Administration activity. The increase in Information and Analysis activity funding requested is a result of several program initiatives.

Helium Fund

Question: On page 168 of your FY 1991 budget justification, you indicate that you expect an increase in the price of helium in the second half of FY 1990. You also say that the Administration once again proposes to sell the helium program's assets.

Please explain why you are proposing to sell the helium assets when you project that the price of helium will increase?

Answer: Where prudent, this administration continues to seek opportunities to shift the production of goods and services from the Government to the private sector in order to reduce Government expenditures and to take advantage of efficiencies that normally result when services are provided through the competitive marketplace. Thus, once again, the Bureau proposes to sell the helium program assets.

The projected price increase is not related to the helium asset sales issue. The recent pricing report submitted to the Congress shows that under a price increase additional funds could be returned to the Treasury toward partial payment of debt owed to the Treasury. The report also indicated that for the first time, the private price for helium was higher than the Government price.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Keyes Helium Plant

Question: I understand the Oklahoma State Department of Health has recently inspected the Keyes Helium Plant and concluded that the asbestos removal and containment was generally satisfactory with the exception of a few pipe joints that remain uncontained and some vinyl-asbestos floor tiles that need to be removed, particularly in the computer laboratory. The Cimarron Industrial Park Authority is trying to show the property to prospective industrial clients, and these remaining items are interfering with a complete tour of the site. How soon can the Bureau of Mines address these remaining asbestos problems?

Answer: On Tuesday, May 15, 1990, Bureau of Mines personnel met with Oklahoma State personnel to mutually observe and discuss the few pipe joints, etc., that remain uncontained. As a result of this meeting, the Bureau is currently proceeding to contract for the removal and abatement of the few remaining problem areas. It is anticipated that transfer of the facility can be accomplished by September 30, 1990.

Question: The Oklahoma State Department of Health also indicates to me that there exists a small used oil slop pond that contains traces of solvents. The Cimarron Industrial Park Authority requests that this oil be removed and the pond area be properly cleaned up prior to the anticipated transfer date of on or before September 30, 1990. Can the Bureau of Mines clean up this small oil pond out of current funding and authority. Will the Bureau eliminate the pond before the date of transfer?

Answer: At the meeting noted above, the waste water pond site was also mutually visited. Clean up of the oil contaminated soil was discussed. The Bureau is currently proceeding to contract for the haulage of the contaminated soil to a designated land fill. It is anticipated that transfer of the facility can be accomplished by September 30, 1990.

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

Question: The State of New Jersey is riddled with abandoned iron and copper mines. It is my understanding that there are around 400 iron ore mines in northern New Jersey. Does the Department of the Interior monitor or maintain a record of currently abandoned iron and copper mines? If so, please describe the nature of the abandoned copper and iron mines in New Jersey. Please provide your assessment of the threat they pose to public safety and private property and the steps necessary to address that threat.

Answer: The Department does not maintain a record of the abandoned iron and copper mines for New Jersey or any other states. Given the limited sites that have been visited to date in New Jersey by the Bureau of Mines, it appears that the failure of such mines in residential areas could pose a threat to the public. For example, the problem in North Arlington, New Jersey, involves over 50 vertical shafts located in the residential area. This problem not only involves a large concentration of shafts but is more acute because the shafts are located in a confined residential area.

The first step towards a solution to the problem of abandoned mines in New Jersey is to determine the magnitude of the problem. This work should include an exhaustive review of all sources of mining information and the compilation of such data on detailed maps. Once the problem has been quantified, then estimates of public exposure, affected properties, and the costs of remediation can be made.

Question: In North Arlington and Mine Hill, New Jersey, there have been cave-ins of abandoned mines, causing significant damage to properties situated above them. Is the Department aware of similar cases in New Jersey? What role can the Department play in addressing the problems in these communities? Please provide the Department's assessment of the North Arlington and Mine Hill situations. What specific action has the Department taken to help remediate the problem in North Arlington? In Mine Hill?

Answer: The Department is not aware of similar cases of abandoned mine failure in New Jersey. The Bureau of Mines has the capability to characterize the scope and magnitude of the problem which is the collapse of capping material in the mine shafts. The solution to the problem involves the accurate location of each shaft and subsequent capping using state-of-the-art techniques. The location of each shaft is currently on record; completion of excavation and capping remains to be accomplished. The North Arlington problem does not include the failure of mine workings.

The Mine Hill problem includes both the collapse of shaft and/or slope capping material and the failure of mine workings. The problem at Mine Hill is further complicated because the exact locations of the mine workings are not known. The Bureau of Mines and the Office of Surface Mining, Reclamation and Enforcement (OSMRE) have provided technical assistance to North Arlington.

In the case of Mine Hill, the Bureau and OSMRE have provided technical assistance and the Bureau is in the process of establishing a Memorandum of Agreement to collect mining information and develop accurate maps of the mine workings. Technical assistance in both cases included site visits, review of existing documents, and recommended courses of action.

Question: Has the Department identified any other areas in New Jersey where similar situations could arise? Has the Department developed a plan for monitoring abandoned mines in New Jersey? Has the Department developed a plan for addressing this problem on a statewide level? Can you provide a summary of the Deparment's actions to remediate collapsed iron and copper mines in other states? Can you provide a summary of the Department's action to remediate collapsed coal mines in other states?

Answer: The Department has not identified other areas in New Jersey where similar situations could arise. Because the mines in New Jersey are, for the most part, not part of an existing database, the Bureau must rely on citizen or State reports of individual events. The Department is not involved in a nationwide remediation plan for iron and copper mines.

The Abandoned Mined Land (AML) Reclamation Research Program is managed by the Bureau and follows priorities set by a review panel that meets annually to select research projects addressing abandoned coal mines. In addition to the AML Program, the Surface Mining Control and Reclamation Act (SMCRA) also provides for an Emergency Program that can respond to coal mine subsidence and open mine shafts. Current research conducted by the Bureau under the AML program which has potential applications to problems of mine collapse in New Jersey includes the following two projects. First, the Bureau of Mines is actively conducting research to develop an imminent subsidence detection system. The key to this system is the repeated evaluation of the overburden strata above the mine opening using active seismic techniques. The approach is to characterize the overburden while it is stable and then observe subtle changes that may signal impending failure. If mine failure is deemed imminent, then remediation operations could be implemented before injury and surface damage occurs. Second, the Bureau is also developing methods for pneumatically placing fill material in unstable mine openings. Research results are encouraging as material has been injected into a simulated mine approximately 125 ft from a borehole.

Question: Last year, Congress appropriate $150,000 for a study of the situation in Mine Hill. Has any of that money been spent? If so, how and by whom? If not, why not?

Answer: Congress appropriated $150,000 with the understanding that local, county, or State funds would be provided to match the Federal share. To date, no funds have been expended. The Bureau of Mines is in the final stages of entering into a Memorandum of Agreement with Mine Hill. Once this Agreement is signed, expenditure of the funds will begin. The first year of the agreement will cover the development of detailed maps of the township delineating surface culture, mine workings (to the limits of the available mine maps), and prior and existing subsidence events. The cost of this first year's effort will be $100,000, of which $50,000 will be the Federal share and $50,000 will be the Mine Hill share. Once the maps of the area have been developed, then the magnitude of the problem can be better assessed and a remediation plan developed.

SUBCOMMITTEE RECESS

Chairman BYRD. The subcommittee will stand in recess until 2 p.m., Monday, May 14, when it will take testimony on the fiscal year 1991 budget request for the Fossil Energy Research and Development and Clean Coal Technology Programs.

[Whereupon, at 11:30 a.m., Monday, May 7, the subcommittee was recessed, to reconvene at 2 p.m., Monday, May 14.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

MONDAY, MAY 14, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2 p.m., in room S–128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd and Stevens.

DEPARTMENT OF ENERGY

FOSSIL ENERGY

STATEMENT OF ROBERT H. GENTILE, ASSISTANT SECRETARY FOR FOSSIL ENERGY

ACCOMPANIED BY:

- **MICHAEL R. McELWRATH, PRINCIPAL DEPUTY ASSISTANT SECRETARY**
- **JEREMIAH E. WALSH, JR., DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT, FUNDAMENTAL RESEARCH AND COOPERATIVE DEVELOPMENT**
- **JACK S. SIEGEL, DEPUTY ASSISTANT SECRETARY FOR COAL TECHNOLOGY**
- **MARVIN I. SINGER, DEPUTY ASSISTANT SECRETARY FOR OIL, GAS, SHALE AND SPECIAL TECHNOLOGIES**
- **DR. SUN CHUN, DIRECTOR, PITTSBURGH ENERGY TECHNOLOGY CENTER**
- **TOM BECHTEL, DIRECTOR, MORGANTOWN ENERGY TECHNOLOGY CENTER**

BUDGET REQUEST

Chairman BYRD. The subcommittee will come to order. This is the time scheduled for the Department of the Interior and Related Agencies Subcommittee to hear testimony in support of the administration's fiscal year 1991 budget requests for fossil energy research and development and for the Clean Coal Technology Program.

Testifying in support of these requests will be Mr. Robert Gentile, Assistant Secretary for Fossil Energy. This is your first time testifying before the subcommittee in your present assignment. You appeared here previously as the Director of the Office of Surface Mining. You have a prepared statement that will be inserted in the record.

Would you please introduce your principal associates who are here today and briefly summarize your statement if you wish.

INTRODUCTION OF ASSOCIATES

Mr. GENTILE. Thank you, Mr. Chairman, I will submit my formal statement for the record. I am pleased to introduce two fossil energy officials who are not typically at a hearing of this type. As you know, Mr. Chairman, we could not run an effective fossil energy R&D program without these two gentlemen.

Behind me is Dr. Sun Chun, the Director of the Pittsburgh Energy Technology Center and the new Director of our Morgantown Energy Technology Center, Mr. Tom Bechtel. Tom, as you are aware Mr. Chairman, is stepping into the shoes of Augustine Pitrolo who had been with Morgantown for 15 years before Secretary Watkins asked him to head up the Idaho Operations Office. Let me say that I had no hesitation whatsoever in naming Tom as the new METC Director. He is a career Federal employee with an outstanding technical background and, like Dr. Chun, dedicated to the task of advancing fossil fuel technology.

Other staff members here with me today are to my immediate left, Mr. Jerry Walsh, my Deputy Assistant Secretary for Management, Fundamental Research and Cooperative Development; to his left, Mr. Marvin Singer, Deputy Assistant Secretary for Oil and Gas; and to my right Mr. Jack Siegel, my Deputy Assistant Secretary for Coal Technology.

In addition, there are some other representatives behind me who would be happy to assist us in answering some questions.

SUMMARY STATEMENT

Mr. Chairman, as I said, I have submitted a lengthy written statement. In the interest of time I would like to make only a couple of key summary points.

First, as you are well aware, we are in a period of rapid change both internationally and domestically. In this country we are hopefully nearing the end of a long and often visible battle and debate on acid rain. We are moving forward on a comprehensive national energy strategy, and as the public hearings and comments to date reaffirm the core of that strategy must remain the effective, efficient, and clean use of the Nation's fossil fuels.

Yet at the same time that we are making progress on the twin fronts of environment and energy policy, we see mounting challenges. Oil imports continue to increase. The issue of global climate change remains one of short-term uncertainty but potentially long-term impact. We see the need for more power generating capacity in many regions of this country, but we do not see a commensurate expansion in utility construction programs. In our Nation's oil fields we see abandonments continuing at a dangerous pace.

Fortunately for your efforts, Mr. Chairman, and the efforts of this committee, we are moving into place new technologies that can address these challenges. The Clean Coal Technology Program is the most visible example. I believe it is important to continue stressing, as you have Mr. Chairman, that the significance of the clean coal program extends well beyond meeting the proposed clean air deadlines. Certainly many of the technologies being tested in this program will meet phase I or phase II targets. Many will also give the Nation's coal consumers the means to continue using coal beyond the year 2000, but a few choices will have to be made under the national emissions cap.

That's why we have expressed considerable concern over the House committee's action that would divert funding for the final two rounds of the program toward a more narrow range of technologies. We are concerned that nearly 80 percent of the Nation's utilities would no longer be eligible to participate in the clean coal program. The budget we are defending here today would preserve the original intent and pace of the Clean Coal Technology Program. It also contains funding for the continued coal R&D program. With this Federal request there are legitimate attempts to address the challenges such as global climate change, the need for alternative liquid fuels, the need for higher efficiency in clean coal technologies. There is also an attempt to address a near-term problem of well abandonments. Oil and gas budget requests are substantially more than past administration submissions.

PREPARED STATEMENT

I know that you and members of the subcommittee have many detailed questions on this budget and our ongoing program, so let me conclude by expressing again our appreciation for your leadership, Mr. Chairman, and for your continued interest in the future of fossil fuels development in this country.

Thank you, Mr. Chairman, I would be happy to take questions.

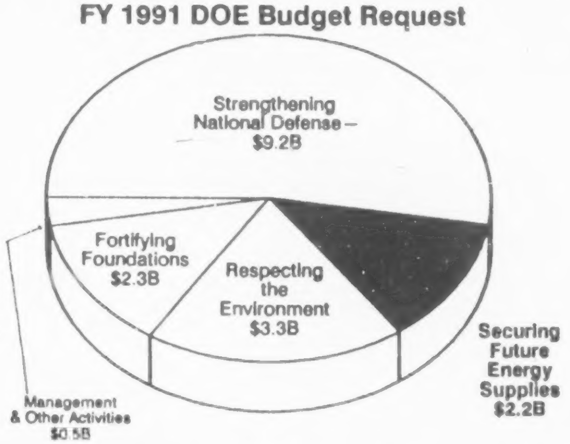
[The statement follows:]

STATEMENT OF ROBERT H. GENTILE

Mr. Chairman and members of the Committee, I am pleased to present the FY 1991 budget request for Fossil Energy-related programs.

At the President's direction, the Secretary of Energy has initiated the development of a National Energy Strategy (NES). The strategy is designed to provide direction for the Department's future policy and funding initiatives. It will provide a comprehensive, long-range strategy for addressing the Nation's near, mid and long term energy needs. The strategy will be based on public input through hearings, written submissions and publicly available reports, all aimed at reconciling our need for secure, competitively priced supplies of energy with environmental, safety and health requirements. The NES Interim Report that we transmitted to you on April 2 contains some important messages from the people of this country. Later this year, the Department will conduct additional hearings to identify the appropriate options to recommend to the President in our final report in December.

Of the $2.2 billion earmarked for "Securing Future Energy Supplies" in the Department of Energy's fiscal 1991 budget request, $658 million is proposed for fossil energy related technologies – i.e. for advanced processes that can extract more effectively or use more cleanly and efficiently the nation's supplies of coal, petroleum and natural gas.



FY 1991 DOE Budget Request

This funding request is allocated among two major components:

- The Clean Coal Technology Program – FY 1991 request: $456 million;
- The Fossil Energy R&D Program – FY 1991 request: $202.3 million.

Fossil fuels currently account for almost 89% of U.S. energy consumption. Even if we adopt more aggressive energy conservation and efficiency measures, makes greater use of solar and renewable energy resources, and restores the nuclear power option – all of which are necessary to a balanced, more secure energy future – fossil fuels will continue to supply most of the nation's energy needs well into the next century. To maintain a viable fossil fuel option, the FY 1991 Fossil Energy program has been shaped by five major factors:

1) Reducing the release of pollutants while simultaneously retaining, or enhancing, economic competitiveness.

There is no reason why the nation cannot call on its technological prowess to achieve both clean air and economic growth. The President's July 21, 1989, Clean Air Act proposal, if approved by Congress, can be the most far-reaching environmental step taken by any industrialized nation in the last 20 years. Of particular relevance to the Fossil Energy program are provisions:

- to control through market based solutions, emissions of pollutants known to cause acid rain;
- to regulate hazardous air emissions from stationary sources; and
- to establish programs for the use of clean fuels in vehicles.

Many of the technologies being demonstrated in the Clean Coal Technology Program or being developed in the Fossil Energy R&D program can help achieve the equal goals of a better environment and a healthy economy. Some of the advanced concepts could play a role in meeting the compliance deadlines established in the President's proposal; others will become vitally important after the deadlines by allowing sustained economic growth within the emission caps envisioned by the President's bill.

In light of this, the FY 1991 budget proposal places even greater emphasis on improving environmental performance of technologies by:

a) addressing global warming concerns, particularly through increased emphasis on development of high efficiency coal utilization systems;

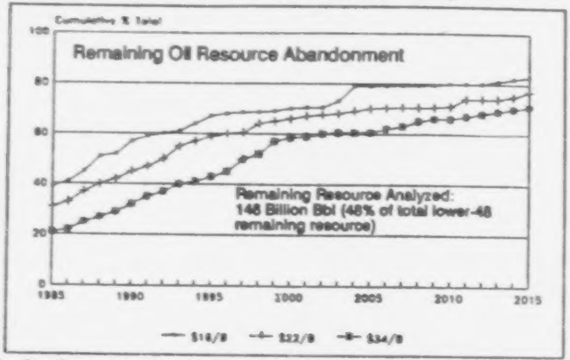
b) pursuing a development schedule responsive to proposed Clean Air Act changes for technologies that can reduce acid rain pollutants or provide clean alternate fuels;

c) initiating development of pollution control technologies capable of achieving very high percentages of emission reductions anticipated for new plants by the proposed Clean Air Act changes, and

d) continuing the DOE/industry Clean Coal Technology joint effort to demonstrate innovative emission controls and power generating technologies that have near-term benefits.

2) Slowing the decline in domestic oil production and countering the rise in imported oil levels.

U.S. oil imports are growing rapidly since lower oil prices have reduced domestic exploration and production. Domestic oil production in 1989 was at its lowest point in 25 years. The Energy Information Administration's 1989 Annual Energy Outlook shows gross oil imports (crude and petroleum products) rising from 47% of domestic consumption in 1987 to 53% in 1990 and to 66% by the year 2000 (in the "base case").



Particularly alarming is the loss of access to existing oil resources brought about by the accelerating pace of oil field abandonments.

In January 1990, the Department issued a study showing that as much as 40% of the nation's oil resource has already been abandoned – up from 30% in 1980 – and if oil prices remain at recent levels (although this is not expected), the figure could rise to 70% shortly after the year 2000. As the chart shows, even if oil prices were to rise to $34 per barrel, the study predicts that companies will lose economic access to more than 60% of the remaining domestic oil resource, outside of Alaska, by the turn of the century. (It should be noted that Alaska accounts for 25% of U.S. production and while it currently does not have an abandonment problem, production from currently producing fields is declining.)

In light of this, the Department has proposed a major restructuring of its oil and gas research programs, with a greater near-term focus on keeping those wells in production that have a high potential for abandonment until longer-range, more effective recovery technology can be developed. This represents a shift in previous government research policies which emphasized longer-term, more basic research. The FY 1991 proposed oil and gas program continues the transition to this new program emphasis by including:

a) program priorities based on resource volumes, risk of resource abandonment and resource-specific barriers to recovery;

b) a major new effort to work jointly with industry-university-state consortia to develop a better understanding of reservoir geoscience and assist industry in prolonging the life of high potential oil fields that risk near-term abandonment;

c) a more aggressive technology transfer program to apprise operators of techniques that can keep economically marginal fields in operation; and

d) a new research effort into understanding and managing the environmental impacts of oil and gas extraction processes.

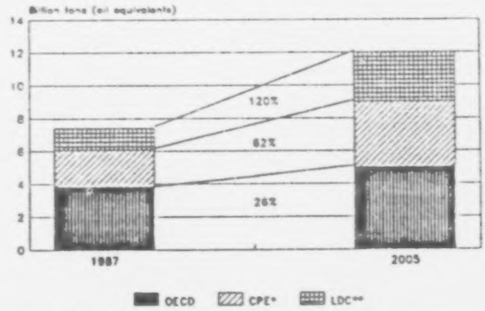
3) Encouraging interfuel and intrafuel competition.

While this Administration continues to rely on free market forces to determine fuel choices, it is also helping to ensure a "level playing field" by elimating non-technical constrains on demand (e.g., non-productive regulations) and fostering development of technologies that can reduce costs, increase confidence in the availability of domestic resources, and offer new end-use options that can encourage competition among fuels. DOE's Fossil Energy program also promotes the development of interfuel competition and markets for U.S. natural gas and electricity through its regulation of natural gas and electricity imports and exports. These programs assure the availability of gas supplies to supplement domestic production. In some areas, they represent the majority of gas available to the market, since domestic production cannot be readily delivered to these areas. These supplies promote interfuel competition and boost consumer confidence in the reliability of natural gas.

Fossil Energy's regulation of electric import and export functions plays much the same role as that of gas. In addition, it adds to the reliability of the nation's electrical system by increasing its integration into the entire North American grid and thus providing an extra degree of stability that lessens the chance of blackouts.

4) Helping reduce the U.S. trade deficit by encouraging and assisting U.S. industry in identifying global markets and developing effective international marketing strategies.

World Primary Energy Requirements



* Centrally Planned Economies ** Less Developed Countries

U.S. owned advanced technologies will become increasingly important to a world being shaped by heightened environmental and economic priorities. The International Energy Agency recently forecast that in the year 2005 the world will be using almost 50% more energy than today — and about 90% of that energy will still come from fossil fuels. With the economic and social changes occurring in eastern Europe and the accelerating industrialization of many developing nations, the need for advanced technologies will become even more important. High efficiency clean coal technologies, for example, may be particularly important in protecting the earth's climate while continuing to allow the use of abundant coal supplies.

5) Increasing the benefits of R&D funds through cooperation with States and other countries

In his budget message, the President noted that "Considerable evidence exists that further increases in national R&D investment will enhance our productivity and brighten our future...In numerous instances States and localities are moving on their own, with their own funds to try new and innovative approaches to problem solving. This blossoming of State and local initiative is welcome." These comments provide support for FE's initiative to enter into competitive cooperative activities with States consistent with our mission.

Cost-shared cooperation promotes leveraging of Federal, state and industrial funding to achieve national energy and environmental goals and is also an important tool for enhancing technology transfer ~~to the private~~ sector.

International cooperative activities can also play a beneficial role in leveraging FE R&D funds and ensuring that the U.S. remains in a technology leadership role. Collaborative international projects also promote U.S. presence in international markets which can facilitate future commercial technology sales.

The Clean Coal Technology Program

The Clean Coal Technology Program is a $5 billion, government-industry effort to demonstrate a variety of advanced, more efficient and environmentally responsive coal utilization technologies. These technologies will reduce or eliminate the economic and environmental impediments that limit the full use of coal. A series of "showcase" facilities are being constructed and operated across the country to demonstrate these improvements over conventional coal technology.

Technologies include new concepts for retrofitting improved pollution control equipment onto existing coal-burning power plants, new systems for repowering or replacing older electric generating facilities with advanced, high-efficiency clean power technology, and innovative approaches for producing clean-burning, coal-based fuel forms that can substitute for higher-value premium fuels.

The program requires at least 50 percent cost-sharing from industry and provides for recoupment of public investments from major commercial successes. To date, 38 projects are underway or in negotiation from the first three rounds of competition.

Prior **Clean Coal Technology Funding Profile**
($ in millions)

	1986	1987	1988	1989	1990	1991	1992
Round #1	$100	$150	$150				
Round #2			$ 50	$525			
Round #3					$575		
Round #4						$600	
Round #5							$600
	$100	$150	$200	$190	$710	$800	$600

← Special Envoys' Program →

Proposed **Clean Coal Technology Funding Profile**
($ in millions)

	1986	1987	1988	1989	1990	1991	1992	1993	1994
Round #1	$100	$150	$150						
Round #2*			$ 50	$190	$135	$200			
Round #3*					$419	$156			
Round #4						$100	$250	$250	
Round #5							$150	$225	$225
	$100	$150	$200	$190	$554	$456	$400	$475	$225

* Rounds #2 and #3 funding stretchouts were directed by Congress in FY89 and FY90

← Special Envoys' Program →

The industrial cost-sharing for these projects has exceeded 60 percent. The Department is preparing for Round #4 competition, scheduled to begin on June 1, 1990.

As the chart on the previous page shows, the budget request proposes to spread funding for the remaining two rounds of Clean Coal Technology competition over several years rather than compressing the budgetary requirements in fiscal years 1991 and 1992. This action will *not* affect the pace of the program. It will *not* result in any fewer projects selected. In fact, it is consistent with previous Congressional funding patterns (which allocated the Administration's FY 1990 request for $575 million for Round #3 over two years and previously has allocated the FY 1989 Round #2 request for $525 million over three years.)

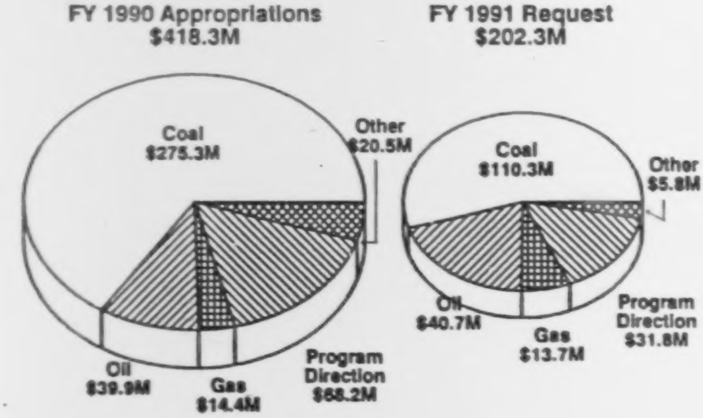
Selected clean coal technology projects, due to their multi-year duration and cost-sharing nature, receive federal funding over several years, typically over three to six years as design, construction and operation progresses. Consequently, the proposed new funding profile will not impact the program but will have significant deficit reduction benefits.

The Fossil Energy R&D Program

In contrast to the Clean Coal Technology Demonstration Program, the Fossil Energy R&D Program is oriented toward the initial stages of the development process -- i.e., the basic and applied research stages through the early stages of process engineering. The budget request for these activities is $202.3 million.

In carrying out this program, the Office of Fossil Energy, either through its headquarters or field centers, administers more than 500 individual research contracts, most carried out by industrial organizations or academic researchers. Within the FY 1991 budget proposal, priority has been given to programs and projects for which there is significant industry participation, either as a project participant or in many cases, as a project financial co-sponsor. In-house research, conducted principally at the Morgantown and Pittsburgh Energy Technology Centers as supporting research for the contract R&D projects, has been scaled back.

The FY 1991 budget also reflects a better balance between funding for coal and oil/gas research, as shown by the charts to the right. Given the near-term urgency of slowing the pace of oil field abandonments and increasing domestic oil production, the Department has earmarked 33 percent of its proposed FY 1991 research program budget (excluding Program Direction, Plant & Capital Equipment, and other non-research activities) for oil and gas related research, compared to only 17 percent in the FY 1990 appropriation.



In the FY 1991 request, Oil and Gas R&D comprise a larger funding share.

FY 1991 Fossil R&D Budget Request — Summary Chart

Coal

Activity	Request
Control Technology & Coal Preparation	$33.5M
Advanced Research & Technology Development	26.5M
Coal Liquefaction	10.6M
Combustion Systems	17.6M
Fuel Cells	7.1M
Heat Engines	6.0M
Underground Coal Gasification	0.5M
Magnetohydrodynamics	0.0M
Surface Coal Gasification	8.5M
Total	$110.3M

Oil and Gas

Activity	Request
Advanced Extraction & Process Technology	$12.9M
Enhanced Oil Recovery	27.1M
Oil Shale	0.7M
Unconventional Gas Recovery	13.7M
Total	$54.4M

Other

Activity	Request
Fuels Programs	$ 2.7M
Environmental Restoration	0.7M
Program Direction	31.8M
Plant & Capital Equipment	2.4M

Coal

The FY 1991 budget request for coal research and development is $110.3 million. Within this budget request, priority has been given to technologies that can reduce the release of air pollutants, including sulfur dioxide, nitrogen oxide and particulates, in addition to carbon dioxide, one of the "greenhouse gases." Included in this priority are projects in *control technology and coal preparation, advanced research and technology development, combustion systems, fuel cells,* and *surface coal gasification.*

High efficiency concepts in *coal gasification, atmospheric* and *pressurized fluidized bed combustion, fuel cells* and *heat engines* are intended to provide options that can reduce the release of carbon dioxide.

Priority has also been given to technologies that potentially can open up new markets for coal and coal products. For example, programs to develop new *atmospheric fluidized bed combustors* and *alternative fuels* are directed at restoring the clean-burning coal option in light industrial, commercial and residential sectors. Programs geared to the transportation sector are found within the *coal liquefaction, surface coal gasification* and *heat engine* programs.

Control Technology and Coal Preparation

Advanced Research, generic and fundamental in nature, is conducted on processes used to separate constituents such as sulfur and nitrogen oxides in coal fuel streams before, during and after combustion.

	FY90 Request	FY90 Approps	FY91 Request	% Change
Advanced Research	$ 1.9	$ 2.1	$ 1.7	-23.8%
Coal Preparation	11.3	19.9	12.2	-38.7%
Flue Gas Cleanup	11.4	16.8	8.6	-48.8%
Gas Stream Cleanup	4.6	16.7	8.5	-49.1%
Waste Management	3.1	2.1	2.6	+23.8%
Total	$32.3	$57.6	$33.5	-41.8%

Numbers may not add due to rounding

Coal Preparation is directed toward the development of advanced coal cleaning technologies that will reduce the ash and sulfur content of U.S. coal so that the product can be formulated into a high quality fuel that could replace oil and/or gas and reduce environmental emissions of acid rain precursors from coal-fired power plants in both new and retrofit applications. Research is conducted in three broad areas: (1) physical treatment and cleaning; (2) chemical/biological pretreatment and cleaning; and (3) ancillary operations.

Flue Gas Cleanup addresses the removal of polluting contaminants from fossil fuel fired systems to meet current and projected environmental standards that inhibit the utilization of fossil fuels. Efforts focus on processes for the combined removal of NOx, SOx; control of SO_2 emissions from utilities; NOx control; emissions control from small scale boilers; and fine particulate control technology.

Gas Stream Cleanup develops technologies for removal of contaminants from gasifier and combustor process streams prior to application in coal utilization systems. Both hardware and environmental protection are key concerns. Applications include PFB combustors, integrated gasifier combined cycle gas turbines, and direct coal-fired turbines.

Waste Management focuses primarily on waste sampling and characterization from coal preparation and emerging technology wastes.

	FY 1991 Request (in millions)
Advanced Research	
• Continue fundamental research on processes used to separate constituents in coal-based fuel streams before, during and after combustion. (FY 1990 - $2.1M)	$ 1.7
Coal Preparation	
• Continue laboratory and bench-scale investigations of microbial concepts for pyrite and organic sulfur removal. Continue supporting research in ancillary operations for all ranks of coal and support studies. Initiate bench scale investigations of advanced chemical techniques for producing clean coal products capable of displacing oil and gas. Continue research on selected technologies for controlling emissions from pre-NSPS utility boilers (CCRI) to achieve the planned 1992 completion schedule. (FY 1990 - $9.8M)	9.6
• Continue in-house research at bench scale to investigate advanced physical and chemical coal cleaning concepts. Continue organic sulfur chemistry. Maintain a data base, characterize feed coal and cleaned coal products. Continue program management support. (FY 1990 - $2.9M)	$ 2.6
Flue Gas Cleanup	
• Continue research for TUNG scrubbing process. Participate in EPRI program of emissions control for electric power generating stations burning high-sulfur coals. Continue in-house research in spray dryer and in-duct technology development. Continue systems integration studies for low cost duct injection for moderate and high sulfur coals. (FY 1990 - $7.1M)	5.0
• Continue research on advanced NOx/SOx chemistry, processes, system modeling, and by-product recovery. Conduct data base support and technical and economic evaluation of processes. (FY 1990 - $2.4M)	1.0
• Continue advanced research on reburning, catalytic, and post combustion control concepts. Continue advanced concept development at larger scale. (FY 1990 - $2.5M)	1.1
• Continue development of advanced separation technology for SOx/NOx control. (FY 1990 - $0.8M)	0.2

	FY 1991 Request (in millions)
• Continue larger scale tests of fine particulate control technology. Complete FY 1989 contract on enhanced mass transfer effect on sorbent utilization. Continue research on emissions control from small scale boilers. Initiate development of CO2 control technology. Continue program management support. (FY 1990 - $1.1M)	1.2
Gas Stream Cleanup	
• For *Pressurized Fluidized-Bed Combustion*, assess feasibility of particle control and conduct follow-on research on barrier technical issues for particle control. (FY 1990 - $0.4M)	0.8
• For *Integrated Gasification Combined Cycle*, continue development of novel and enhanced sulfur sorbents. Continue novel fluidized bed cleanup system construction at the gasifier test facility. Continue design of joint project with industry for a particulate control test facility. (FY 1990 - $7.9M)	3.8
• For *Direct Coal-Fired Turbines*, continue development of acoustic enhanced combined sulfur/particulate removal. Carryout testing of cleanup equipment for METC combustor. Carryout granular bed filter tests and begin long term tests of selected concepts. (FY 1990 - $2.3M)	2.4
• Continue membrane development. Continue development and testing of materials for ceramic candle and cross-flow filters. Conduct follow-on testing of novel particle control concepts. Fund program management support. (FY 1990 - $2.2M)	1.5
Waste Management	
• Perform characterization of low rank coal waste and waste based liner materials development. (FY 1990 - $0M)	0.2
• Continue multi-site field monitoring of disposed wastes; characterization of wastes; waste-related data base maintenance; and program management support. (FY 1990 - $1.2M)	2.4

Advanced Research and Technology Development

	FY90 Request	FY90 Approps	FY91 Request	% Change
Coal Utilization Science	$ 3.5	$ 4.1	$ 3.3	-19.5%
Materials and Components	6.4	8.9	7.4	-16.9%
Technology Crosscut	11.8	7.7	10.4	+35.0%
University/National Lab Coal Research	3.8	5.7	5.4	-5.3%
Total	$25.5	$26.4	$26.5	+0.4%

The Advanced Research and Technology Development (AR&TD) Program's overall focus is on removing the inherent scientific and engineering barriers in generic technical areas that may hinder the development of all fossil energy technologies.

The *coal science* program focuses on fundamental research which will lead to coal utilization systems that offer substantial improvements in efficiency, reliability and environmental performance.

The *materials and components* program includes generic studies of materials, solid transport, and novel concepts to significantly improve the performance and cost of existing fossil systems or enable the development of new systems and enhanced capabilities.

The *technology crosscut* program undertakes management and scientific studies and research relating to several crosscutting areas relating to fossil fuel technologies.

The *University/National Laboratory Coal Research program* conducts basic research on coal science, reaction chemistry, advanced process concepts, engineering fundamentals, thermodynamics, environmental sciences and high temperature phenomena.

	FY 1991 Request (in millions)
Coal Utilization Science	
• Continue fundamental research on the properties of constituents and the nature of reactions in coal utilization processes. Investigations are made of the formation, transformation and characterization of fuel and combustion product species; coal devolatilization, pyrolysis and volatile and char oxidation; and radiant heat transfer. (FY 1990 - $4.1M)	$3.3
Materials and Components	
• *Components:* Continue activities to develop novel components for advanced coal conversion technologies. Continue fundamental research on solid transport to include research on the Granular Flow Advanced Research Objective (GFARO) and exploratory research on multiphase flow. (FY 1990 - $2.5M)	1.3
• *Materials:* Continue research on structural ceramic composites, advanced austenitic alloys, ceramic filters, iron aluminides, coatings and claddings, ceramic membranes, ceramic catalyst supports, mechanisms of erosion and corrosion, solid state electrolyte materials, technology transfer and new ceramic materials processes. (FY 1990 - $6.4M)	6.1
Technology Crosscut	
• *Environmental Activities:* Continue analyses of issues associated with air and water quality, solid waste disposal, and toxic substances. Continue support of occupational health, quality assurance, and safety compliances services. (FY 1990 - $2.4M)	2.2
• *Technical & Economic Analyses:* Continue studies supporting FE multi-year planning and program formulation; conduct contract studies that crosscut a number of FE programs, including strategic benefits of new fossil fuel technology; provide technical and economic analytical support. (FY 1990 - $1.8M)	2.1
• *International Program Support:* Continue to conduct analyses, studies and technical evaluations of ongoing and planned bilateral and multilateral activities. Fund selected activities of the International Energy Agency. (FY 1990 - $0.7M)	1.0
• *Coal Technology Export:* Provide support for coal and coal technology export opportunities and initiatives. (FY1990 - $0.2M)	2.0
• *Instrumentation and Diagnostics:* Continue studies to measure acoustic parameters of fluids in multiphase flow, and research on laser-based chemical species analysis, particle species and size determinations. Continue sensor development for the harsh environments of coal conversion processes. Increase study of "expert" instrumentation system applications to coal utilization. Continue coordinating activities for all Fossil Energy instrument-related projects. Conduct research on an instrument to measure the opacity of gas downstream of a barrier filter used to control erosion of turbine components. (FY 1990 - $1.5M)	1.7

FY 1991 Request (in millions)

- *Bioprocessing of Coal:* Expand research on coal bioprocessing, including work on: identification of more effective microbes and enzyme systems for bioconversion of coal, bioprocess engineering and related molecular genetics, and evaluation of thermophiles (i.e., organisms that function between 45 and 100 degrees C) for removal of sulfur, nitrogen and ash from coal. (FY 1990 - $1.0M) 1.4

University/National Laboratory Coal Research

- Support approximately 26 new grants at U.S. colleges and universities for basic research on coal science, coal surface science, reaction chemistry, advanced process concepts, engineering fundamentals and thermodynamics, environmental sciences and high temperature phenomena. Support 3-5 competitively determined research grants at Historically Black Colleges and Universities (HBCUs). (FY 1990 - $5.7M) 5.4

Coal Liquefaction

	FY90		FY91	%
	Request	Approps	Request	Change
Advanced Research	$ 3.1	$ 6.6	$ 2.9	-56.1%
Direct Liquefaction	2.9	17.7	4.5	-74.6%
Indirect Liquefaction	2.7	8.5	2.4	-71.8%
Support Studies/ Engineering Eval.	1.0	1.7	0.8	-52.9%
Total	$ 9.7	$34.5	$10.6	-69.3%

This program is developing advanced technology to produce synthetic liquid fuels from coal. The focus is on two approaches: *direct liquefaction* and *indirect liquefaction*.

The major funding reductions in this budget category are associated with the successful completion of tests at two process development units: the Wilsonville, AL, direct liquefaction facility, where tests of advanced integrated two-stage liquefaction have shown the potential for reducing the costs of coal liquids to the equivalent of $35 per barrel (from an estimated cost of more than $70 per barrel in the late-1970s); and the LaPorte, TX, liquid phase methanol synthesis development unit, where successful test runs have provided the basis for scale up of the process at the Great Plains Coal Gasification Plant under a cost-shared Clean Coal Technology project. Funding has also been elminated for generic bench scale activities at the Pittsburgh Energy Technology Center.

FY 1991 Request (in millions)

Advanced Research

- Continue research on: novel catalytic, biological and other approaches to coal liquefaction; improving the understanding of liquefaction processes; and, on novel catalytic approaches to coal liquefaction. Continue to fund technical and program management support. (FY 1990 - $6.6M) $2.9

Direct Liquefaction

- Continue PETC in-house research and laboratory research in coprocessing, staged catalytic liquefaction and advanced process concepts. (FY 1990 - $17.7M) 4.5

Indirect Liquefaction

- Continue laboratory research at PETC. Continue laboratory research with industry and universities on oxygenate fuel process concepts. Continue novel catalyst research. (FY 1990 - $8.5M) 2.4

FY 1991 Request (in millions)

Support Studies/Engineering Evaluations

• Maintain process stream characterization research for advanced coal liquefaction and co-processing processes. Continue novel catalyst development and process studies at Sandia National Lab. (FY 1990 - $1.7M)	0.8

Combustion Systems

The Department of Energy has developed a program to increase the contribution and application of the nation's coal resources through the development of acceptable combustion systems and fossil-derived fuels for the marketplace.

	FY90		FY91	%
	Request	Approps	Request	Change
Advanced Research	$ 1.2	$ 2.4	$ 2.2	-8.3%
Atmospheric Fluidized Bed Combustion	1.7	3.0	1.2	-60.0%
Pressurized Fluidized Bed Combustion	6.6	12.6	7.5	-40.5%
Advanced Combustion	2.6	5.5	3.7	-32.7%
Alternative Fuels Utilization	3.7	9.7	3.0	-69.1%
Total	$15.8	$33.2	$17.6	-47.0%

First-generation *atmospheric fluidized bed combustion technology* is considered commercial for large industrial boiler applications (200,000 lb/hr steam and greater). Therefore, the Fossil Energy R&D program is aimed at extending the applicability of this technology to light industrial, commercial/institutional and possibly, residential sectors.

Similar target sectors are also being pursued in the *Advanced Combustion Technology Program.* The slagging combustors available in the near-term lend themselves most economically to the heavy industrial and utility markets; the Fossil Energy program is improving the industrial/utility concepts and extending the technology into the light industrial, commercial and residential markets.

Pressurized fluidized bed combustion is intended primarily as a utility power generating option. The first commercial-scale units are being installed in the U.S. in the Clean Coal Technology Program; thus, the Fossil Energy R&D program is concentrating on "second-generation" pressurized fluidized bed concepts.

Alternative fuels include raw or beneficiated coal, either pulverized or ultrafine; other solid coal-based fuels, either dry or in slurry form; and chars and liquids from coal conversion and stabilization processes.

FY 1991 Request (in millions)

Advanced Research

• Continue generic studies to examine the fundamental aspects of combustion mechanisms, engine combustion design, corrosive behavior and deposition of combustion products. (FY 1990 - $2.4M)	$2.2

Atmospheric Fluidized Bed Combustion

• Continue to conduct in-house experimental and analytical erosion studies and AFBC development efforts. (FY 1990 - $0.5M)	0.4
• Continue proof-of-concept testing within the Advanced Concepts Program. (FY 1990 - $0.5M)	0.4
• Continue development of subsystem integration technology within the Special Applications Program. (FY 1990 - $1.5M)	0.3
• Continue low rank coal studies at UNDEERC. (FY 1990 - $0.1M)	0.1

	FY 1991 Request (In millions)
Pressurized Fluidized Bed Combustion	
• Continue research efforts at METC on PFB dynamics, systems analysis and combustion characterization. (FY 1990 - $1.1M)	0.9
• Continue Advanced Concepts Phase III integrated subsystem tests at 5MWe pilot plant scale. (FY 1990 - $4.3M)	5.1
• Initiate construction of Hot Gas Clean-up Filter Test Facility at TIDD PFB Demo Plant. (FY 1990 - $5.9M)	1.4
• Fund technical and program management support. (FY 1990 - $0.1M)	0.1
Advanced Combustion Technology	
• Continue development of the most promising advanced combustion systems for industrial, utility, commercial and residential applications. (FY 1990 - $3.6M)	1.6
• Continue in-house activities on combustion enhancement and pollution suppression research including data base development for technology transfer to the private sector. Continue to provide technical and program management support. (FY 1990 - $1.0M)	1.1
• Continue advanced high efficiency cycles for CO_2 reduction. (FY 1990 - $1.0M)	1.0
Alternative Fuels Utilization	
• Continue fuel characterization and boiler tests of beneficiated coal-leased fuels. Continue transport, handling and storage studies, and combustion characterization of beneficiated coal based fuels. Continue project management support. Assess and test deeply beneficiated coals for retrofitting large pre-NSPS coal-fired boilers for acid rain control. Provide technical and program management support. (FY 1990 - $5.5M)	$3.0

Fuel Cells

The objectives of the Fuel Cells program are to support technology base development of fuel cell systems and to provide technology that improves U.S. international competitiveness by generating export sales for technology/products.

	FY90		FY91	%
	Request	Approps	Request	Change
Advanced Research	$ 1.0	$ 1.4	$ 0.4	-71.4%
Phosphoric Acid Sys.	0.0	8.3	0.0	-100.0%
Molten Carbonate Sys.	3.4	16.8	5.7	-66.1%
Advanced Concepts	2.1	11.5	1.0	-91.3%
Total	$ 6.5	$38.0	$ 7.1	-81.3%

Advanced research, fundamental and generic in nature, is conducted to better understand the basis of the underlying processes involved in fuel cell operation and to explore novel concepts and advanced materials.

Phosphoric acid systems have reached a prototype commercial status. The IFC development effort is fully funded through its scheduled 1992 completion date. DOE believes that any further technology development should be the responsibility of the private sector.

The technical feasibility of *molten carbonate fuel cells* operating at approximately 60 percent electrical conversion efficiency (natural gas to busbar) has been forecast by single cell testing. The complexity and associated capital costs of advanced fuel cell systems are projected to be less than those for first generation phosphoric acid fuel cell systems.

The *solid oxide fuel cell* is an advanced, high temperature solid state fuel cell that offers promise in electric utility and in cogeneration applications in industrial and commercial sectors.

	FY1991 Request (in millions)
Advanced Research	
• Continue generic research in molten carbonate fuel cell electrochemistry. (FY 1990 - $1.4M)	$0.4
Molten Carbonate Systems	
• Continue two cost-shared MCFC system/stack contracts selected under the FY 1990 competitive action. (FY 1990 - $16.5M)	5.6
• Continue development of alternate anode materials, and program management support. (FY 1990 - $0.3M)	0.1
Advanced Concepts	
• Continue cost-shared development of tubular solid oxide fuel cell (SOFC) technology for coal-fueled applications. (FY 1990 - $8.9M)	0.9
• Continue gasification/SOFC systems analysis and materials development. Continue program management support. (FY 1990 - $2.6M)	0.1

Heat Engines

	FY90 Request	FY90 Approps	FY91 Request	% Change
Gas Turbines	$ 6.5	$10.4	$ 3.0	-71.2%
Diesel Engines	2.4	10.5	3.0	-71.4%
Total	$ 8.9	$20.9	$ 6.0	-71.3%

The principal goals of this program are to ensure the strategic security of liquid and gas supplies and to provide technology and technology-based products that improve U.S. international competitiveness by generating export sales for technology/products. Successful development of coal-fueled heat engines could provide an alternative to oil-fueled systems in industrial cogeneration, locomotive, marine and utility applications.

The program focuses on overcoming the technical problems associated with combustion, corrosion, deposition, wear and particulate control when burning dry, slurried or gaseous fuels in turbines and diesels.

	FY1991 Request (in millions)
Gas Turbines	
• Continue coal-fueled gas turbine integrated systems testing with one contractor instead of three in FY 1990 (FY 1990 - $7.7M)	$2.1
• Continue pressurized coal combustion testing, systems analyses, and program management support. (FY 1990 - $2.7M)	0.9
Diesel Engines	
• Continue coal-fueled diesel engine integrated system development with one contractor instead of two; continue novel concept project. Continue combustion testing and systems analysis, low-rank coal activities, and program management support. (FY 1990 - $10.5M)	3.0

Underground Coal Gasification

This program supports the development of viable technology for in situ conversion of coal to a cleaner burning, easily transportable gaseous fuel. Program efforts are directed toward the definition of technical, operational, and environmental parameters sufficient to allow industry to make decisions concerning the commercial development of the technology.

	FY90 Request	FY90 Approps	FY91 Request	% Change
Technology Develop.	$ 0.2	$ 0.2	$ 0.3	+50.5%
Environmental and Advanced Research	0.2	0.6	0.2	-66.7%
Total	$ 0.4	$ 0.8	$ 0.5	-37.5%

	FY 1991 Request (in millions)
Gasification Technology Development	
- Continue cooperative research efforts with WRI (FY 1990 - $0.2M)	$0.3
Environmental and Advanced Research	
- Continue environmental compliance, restoration, and reclamation activities at historical UCG test sites as required by law, (FY 1990 - $0.6M)	0.2

Magnetohydrodynamics (MHD)

The current FY 1990 MHD program continues the proof-of-concept (POC) program which is based on the Department's June 1984 Coal-Fired MHD Preliminary Transition and Program Plan. Since FY 1986, the Congress has included specific private sector cost-sharing requirements for the POC program in its annual appropriations laws. This program will provide the design basis for the development of components and subsystems and is aimed at furnishing the technology base for integrated, long duration, POC testing. Long duration POC testing is needed for the advancement of the MHD technology to the retrofit demonstration stage which is a necessary pre-requisite for subsequent commercial application.

	FY90 Request	FY90 Approps	FY91 Request	% Change
Proof of Concept Topping Cycle	$ 0.0	$25.4	$ 0.0	-100.0%
Proof of Concept Bottoming Cycle	0.0	9.0	0.0	-100.0%
Proof of Concept Seed Regeneration	0.0	2.5	0.0	-100.0%
Systems Studies, Spt. Research, Concep. Des	0.0	3.5	0.0	-100.0%
Total	$ 0.0	$ 40.4	$ 0.0	-100.0%

	FY 1991 Request (in millions)
- **Since it is estimated that $92 million (in 1988 dollars) is needed to complete POC testing, the Department believes that the cost of continuing its MHD program is not affordable in light of current fiscal constraints and in light of the development of other high efficiency techniques. (FY 1990 - $40.4M)**	$0.0

Surface Coal Gasification

	FY90 Request	FY90 Approps	FY91 Request	% Change
Advanced Research	$ 0.7	$ 2.6	$ 0.5	-80.8%
Systems for Power Production	1.2	6.3	3.7	-41.3%
Systems for Industrial Fuel Gas Production	0.8	0.9	0.0	-100.0%
Systems for Synthesis Gas Production	1.1	1.7	1.1	-35.3%
Systems for CoProducts Production	4.9	11.9	3.2	-73.1%
Total	$ 8.7	$23.4	$ 8.5	-63.7%

This program is organized to foster the development of advanced gasifier systems for the production of: electric power, synthesis gas (for synthetic natural gas, indirect liquefaction and chemical feedstocks), and coproducts (production of solids, liquids, and gases).

This activity also provides for basic and fundamental research related to surface coal gasification processes including studies of reaction mechanisms and chemistry.

	FY 1991 Request (in millions)
Advanced Research	
• Continue coal gasification system assessment and modeling effort, studies of ash and slag characteristics, and precursor properties of condensible hydrocarbons (FY 1990 - $1.0M)	$0.5
Systems for Power Production	
• Continue METC in-house sulfur kinetic studies, efforts on fixed-bed and fluidized bed gasifiers and technical and program management support. (FY 1990 - $2.1M)	1.8
• Expand test program to develop a data base needed for commercialization of the GE gasifier cleanup system. (FY 1990 - $1.2M)	0.5
• Continue development and testing of hot desulfurization in an entrained flow reactor system for an IGCC demonstration. (FY 1990 - $1.4M)	1.4
Systems for Industrial Fuel Gas Production	
• The Industrial Fuel Gas production program will be phased out in FY 1991 and related research continued in other Surface Coal Gasification programs. (FY 1990 - $0.9M)	0.0
Systems for Synthesis Gas Production	
• Conduct transportation fuels study. (FY 1990 - $0.0M)	0.2
• Develop hydrogen preparation concepts. (FY 1990 - $0.5M)	0.3
• Continue systems analysis and model development efforts. Provide technical and program management support. (FY 1990 - $0.6M)	$0.6
Systems for Coproducts Production	
• Conduct mild gasification studies to establish a matrix of product yields and investigate product options for coal-based fuels from mild gasification. (FY 1990 - $9.1M)	0.8
• Upgrade mild gasification plant to 1 ton/hr capability. (FY 1990 - $1.0M)	1.0
• Initiate studies to improve mild gasification product. (FY 1990 - $0.0M)	0.2

	FY 1991 Request (in millions)
• Continue fuel upgrading R&D (FY 1990 - $0.4M)	0.5
• Continue modeling analysis and system analysis. Provide technical and program management support. (FY 1990 - $0.3M)	0.7

Petroleum and Gas

Extraction technology strategies to increase domestic oil and gas supplies include programs in enhanced oil recovery, unconventional gas recovery, oil shale and advanced extraction and process technology. In contrast to prior years, the Petroleum and Gas R&D program in FY 1991 proposes a much nearer-term strategy focused on identifying and maintaining economic access to high potential, high risk oil reservoirs and the development of a more complete data base of both conventional and unconventional natural gas resources.

The program also includes a mid-term strategy that emphasizes the use of advanced technology to maximize recovery effectiveness from oil and gas reservoirs, and a long-term strategy that seeks to improve basic understanding of oil reservoirs and develop so-called "speculative" natural gas resources.

Advanced Extraction & Process Technology

The Advanced Extraction and Process Technology (AEPT) Program pursues new concepts to achieve major increases in efficiency and cost reduction of recovery and upgrading techniques for oil, gas, and oil shale.

	FY90		FY91	%
●	Request	Appropс	Request	Change
Fundamental Geoscience and Extraction Research	$ 1.5	$ 2.8	$ 7.4	+164.3%
Supporting Technology and Environ. Research	3.1	0.8	4.2	+425.0%
University Geoscience Research	0.0	0.0	1.3	+100.0%
Total	$ 4.6	$ 3.6	$ 12.9	+258.3%

The goals of this research program are: to conduct fundamental research relevant to recovery and upgrading of oil, gas and oil shale; to pursue application of discoveries from unexplored new concepts which may achieve major increases in the recovery and upgrading of oil, gas and oil shale resources.

The Fossil Energy Office in FY 1991 will initiate geotechnology research based on the Hydrocarbon Geoscience Research Strategy and the detailed Oil and Gas Implementation Plan jointly funded with consortia of states, industry, and universities. The program will be based on competitive procurement of appropriate performers for major parts of the implementation. It is anticipated that this initiative will more align oil and gas R&D with the nearer term needs of the nation, will obtain greater cost-sharing by the private sector, and will facilitate technology transfer to the private sector. The AEPT program will support this initiative through research to overcome barriers to recovery identified by the Enhanced Oil Recovery and Unconventional Gas programs. Associated tasks in the Advanced Extraction and Process Technology program include reservoir description R&D; extraction and engineering R&D; and environmental and related R&D and technology transfer.

Fundamental Geoscience and Extraction Research

	FY 1991 Request (in millions)
• Continue existing research on geoscience and extraction technology and development of advanced instrumentation to measure reservoir characteristics and thermal fronts. Explore novel extraction and production methods for oil, gas, shale oil, and tar sands liquids; continue research to develop theory, instrumentation, and predictive models to determine reservoir heterogeneities and relate this information to the production and recovery of bypassed oil and gas. (FY 1990 - $2.8M)	$4.3
• Initiate cost shared funding of geotechnology research consortia with states, universities and private industry in supporting technology associated with the Geoscience Strategy and the Oil and Gas Implementation Plan. (FY 1990 - $0.0M)	3.0
• Fund technical and program management support. (FY 1990 - $0.03M)	0.1

Supporting Technology and Environmental Research

• Increase the program of fundamental studies including crosscutting research in petroleum chemistry focusing on structural characterization and determination of a structure-property relation of heavy crude, intermediate product stream, product, and byproduct, coprocessing, gas processing, and biotechnology. Fund technical and program management support. (FY 1990 - $1.0M)	4.2

University Geoscience Research

• Continue funding third year PRDA program of university-based, fundamental research to advance oil and gas extraction. Fund technical and program management support. (FY 1990 - $0M) *Note: This item was funded in Fundamental Geoscience and Extraction Research in FY 1990.*	$1.3

Enhanced Oil Recovery

	FY90 Request	FY90 Approps	FY91 Request	% Change
Light Oil	$14.2	$22.5	$22.5	0.0%
Heavy Oil	4.1	4.0	4.6	+15.0%
Tar Sands	0.0	0.9	0.0	-100.0%
Total	$18.3	$27.4	$27.1	-1.1%

Enhanced oil recovery (EOR) can help sustain domestic oil production in the critical period between now and the time when the nation will likely rely more extensively on synthetic and renewable fuels. The program is addressing the near-term problems of maintaining access to currently producing marginal fields and is targeting research on specific, high priority resource classes. It is also developing advanced techniques that can maximize recovery. In FY 1991, a regional/reservoir research program jointly funded with consortia of states, industry and universities will be initiated.

	FY 1991 Request (in millions)
Light Oil	
• Continue research in light oil recovery techniques and conduct related planning, technical and analytical assessment, and program management support to classify and prioritize resource targets and research activities (FY 1990 - $4.4M)	$3.4
• Initiate a key regional/reservoir research program jointly funded with consortia of states, industry, and universities. (FY 1990 - $0M)	10.0
• Continue a geoscience effort and reservoir characterization and related fundamental studies addressing definition of reservoir structure and composition. (FY 1990 - $9.3M)	4.8
• Initiate a program to understand the environmental impacts associated with light oil recovery operations. (FY 1990 - $0M)	0.7
• Provide support for a MEOR conference and continue thermophilic bacteria recovery efforts. (FY 1990 - $2.7M)	0.3
• Continue the industry/state cooperative effort. Conduct a technology transfer program to include meetings, workshops and extension service offices. Continue the National Laboratory/industry partnership program. (FY 1990 - $2.8M)	3.3
Heavy Oil	
• Continue basic research in mobility control mechanisms and alkaline flooding. Initiate an alkaline flood test. (FY 1990 - $1.6M)	$1.5
• Conduct a study to identify resource targets and conduct related planning and analytical assessment studies. Conduct a technology transfer program to include workshops, extension service offices, and a summer intern program. (FY 1990 - $0.5M)	0.9
• Continue fundamental research on reservoir and fluid properties (FY 1990 - $1.1M)	0.4
• Initiate an environmental impact program for heavy oil. (FY 1990 - $0M)	0.8
• Continue a geoscience characterization program, research in novel extraction approaches to presently deemed unrecoverable, heavy oil resources, and fundamental studies of reservoir characteristics and injection fluid interactions. Provide program support. (FY 1990 - $0.9M)	1.0

Oil Shale

	FY90 Request	FY90 Approps	FY91 Request	% Change
Technology Base	$ 1.0	$ 6.7	$ 0.7	-90.0%
Environmental Mitigation	0.7	2.3	0.0	-100.0%
Total	$ 1.7	$ 9.0	$ 0.7	-92.2%

Oil shale technology development involves the development of extraction and conversion processes designed to convert oil shale to various liquid fuels. The program focuses on basic research to systematically study the chemistry, kinetics, and emissions related to eastern and western shale processing. The FY 1991 program proposes to reduce funding for oil shale research in favor of more near-term, urgent priorities in the petroleum program. Basic research in oil shale properties is continued with engineering work on retorting and related process-related effort being postponed for the present time.

	FY 1991 Request (in millions)
Oil Shale Technology Base	
• Continue funding for WRI to perform characterization of reference shales. (FY 1990 - $6.7M)	$ 0.7
Environmental Mitigation	
• No activity. (FY 1990 - $2.3M)	0.0

Unconventional Gas Recovery

	FY90 Request	FY90 Approps	FY91 Request	% Change
Eastern Gas Shales	$ 0.3	$ 3.2	$ 2.7	-15.6%
Western Tight Sands	0.3	3.5	3.0	-14.3%
Environmental and Advanced Research	3.5	7.7	8.0	+3.9%
Total	$4.1	$14.4	$13.7	-4.9%

This program develops advanced technologies to extract natural gas from currently unrecoverable gas resources by reducing the uncertainty in the magnitude of the gas resources and the conditions under which they can be produced.

In FY 1991, the program will initiate jointly funded research with a consortia of states, industry and universities to develop a natural gas data system and a classification scheme for conventional gas reservoirs.

	FY1991 Request (in millions)
Eastern Gas Shales	
• Continue in-house support and update the predictive models associated with reservoir and stimulation performance; continue systems studies in support of production strategies; complete field tests for gas production in multiple strata; conduct fractured reservoir mapping studies; and complete horizontal drilling/production tests. (FY 1990 - $3.2M)	$2.7
Western Tight Gas Sands	
• Complete extrapolation of multi-well results to other areas of gas potential. Continue studies on developing concepts for the origin of natural fractures in tight sand basins. Complete stimulation of slant/horizontal well. (FY 1990 - $3.5M)	3.0
Environmental and Advanced Research	
Speculative Resources	
• Continue in-house geologic, geophysical and geochemical efforts to study deep source gas generation potential in subduction zones and associated sediments. (FY 1990 - $0.2M)	0.3
• Continue research on geological/geochemical studies on origin and mitigation of gas in deep sedimentary basins. (FY 1990 - $0.5M)	0.5
Conventional Resources	
• Establish and develop diagnostics for evaluating and characterizing natural and induced fractured gas reservoirs. (FY 1990 - $0)	1.5

	FY 1991 Request (in millions)
• Initiate development of a natural gas data system for both unconventional and conventional reservoirs. Initiate development of a gas classification system for conventional reservoirs based on depositional environments and recovery efficiencies. This research will be jointly funded with consortia of states, industries and universities. (FY 1990 - $0)	$4.0
• Initiate effort to improve economics of air-drilled horizontal wells through improvements in drilling and completion techniques. (FY 1990 - $0)	1.0
• Complete secondary gas recovery project. (FY 1990 - $3.0M)	0.7

Fossil Energy Environmental Restoration

In May 1983, the Pittsburgh and Midway Coal Mining Co. (P&M), the DOE contractor/operator of the Ft. Lewis Coal Liquefaction Pilot Plant (Tacoma, Washington), was notified by EPA that they were potentially liable along with hundreds of others for cleanup of the Western Processing Site. DOE, P&M and others agreed to pay the costs of cleaning up the site and a trust fund was established to receive and disburse payments.

Total site cleanup (Phase I/Surface and Phase II/Subsurface) was estimated to be a minimum of $40 million. Currently, cleanup is in Phase II and monitoring will not be complete until the year 2020.

In May 1988, the Laramie Project Office received a Notice of Violation from the Wyoming Department of Environmental Quality. As a result, DOE has agreed to assist in the cleanup of the groundwater contaminated by hydrocarbons at the Rock Springs Oil Shale retorting site. Cleanup of the Rock Springs site includes groundwater sampling and analysis, pumping and water treatment, well abandonment and reseeding.

As a result of the DOE environmental survey that was conducted in February, 1989; it was found that two FE Surface Coal Gasification research PDUs at the Rockwell International Site (Calif.) required cleanup of hazardous materials. Government owned property accountable under the contract is contaminated with hazardous materials including tars, heavy oils, and asbestos generated during the conduct of R&D at the Rockwell Site. Also discovered during clean-up was asbestos insulation on piping and a 150 foot underground contaminated line.

	FY 1991 Request (in millions)
• Continue to fund DOE share of Ft. Lewis trust fund Phase II cleanup of Western Superfund site. (FY 1990 - $1.0M)	$0.2
• Continue cleanup of the Rock Springs site using prior year funds. (FY 1990 - $0.0M)	0.0
• Fund cleanup of hazardous materials at the Rockwell International site. (FY 1990 - $0.0M)	0.5

Fuels Programs

	FY90 Request	FY90 Approps	FY91 Request	% Change
Fuels Programs	$2.7M	$2.7M	$2.7M	0%

The Office of Fuels Programs is responsible for regulating natural gas imports and exports, transmission facilities for electricity imports, electricity exports, and implementing the Powerplant and Industrial Fuel Use Act. The Office also develops trade policy for natural gas and electricity.

	FY 1991 Request (in millions)
• Provide funding for the regulation of natural gas imports and exports, electric import transmission facility certification, electricity export authorization, and implementation of the Powerplant and Industrial Fuel Use Act; and the development of natural gas and electricity trade policy (FY 1990 - $2.7M)	$2.7

Program Direction

	FY90		FY91	%
	Request	Approps	Request	Change
Headquarters Program Direction	$ 9.1	$ 16.2	$ 9.9	-38.9%
ETC Program Direction	16.5	51.8	21.6	-58.3%
Federal Inspector for the Alaskan Natural Gas Transportation System	0.2	0.3	0.3	0.0%
Total	$25.8	$68.3	$31.8	-53.4%

This activity provides funding for salaries, benefits and overhead expenses for the management of FE programs at Headquarters, the Energy Technology Centers, the Bartlesville Project Office, and the Metairie Site Office.

The Headquarters element has overall program responsibility which is accomplished through the development and implementation of policy, establishment of program objectives and by monitoring the performance of work conducted at the field offices.

The Bartlesville Project Office, Metairie Site Office and the Energy Technology Centers (ETCs) support day-to-day project management functions for assigned programmatic areas including performing such in-house research program activities as contract and National Laboratory monitoring, development and maintenance of project, budget and procurement plans, and other activities related to program and site support.

The Office of the Federal Inspector for the Alaskan Natural Gas Transportation System is responsible for coordinating all Federal activities pertaining to the construction and initial operation of the pipeline. The Office of the Federal Inspector also enforces federal laws and permits, and monitors activities that affect the system.

	FY 1991 Request (in millions)
Headquarters Program Direction	
• Provide funds for salaries and benefits of 123 FTEs at Headquarters. This staff implements and communicates policy to the ETCs, sets program objectives, develops program plans and evaluates alternative strategies; develops and defends budget requests; approves procurement plans, monitors work programs. (FY 1990 - $9.1M)	$8.7
• Fund travel in support of the activities stated above. Both domestic and international travel is conducted. (FY 1990 - $0.7M)	0.5
• Provide contractual services that are generic to the entire FE program. Included are items such as printing, computer services, technical support services, conferences, etc. (FY 1990 - $6.4M)	0.8

ETC Program Direction	FY 1991 Request (in millions)
• Fund salaries and benefits of the ETC staff of 301 FTEs. Activities of the staff include contract and lab monitoring; development and maintenance of project, budget, and procurement plans, and other activities related to program and site support. (FY 1990 - $20.4M)	16.3
• Fund travel in support of the coordination of the above activities in the attainment of program goals, both on the domestic front and abroad. (FY 1990 - $1.0M)	1.1
• Fund facility operations, maintenance, finance and administrative contractors and other costs not appropriately chargeable to R&D projects, in support of this level of FTEs. (FY 1990 - $30.4M)	4.2

Federal Inspector for the Alaskan Natural Gas Transportation System	
• Fund administrative and support functions; continue to assess developments in U.S. and Canadian energy markets and maintain liaison with project sponsors, producers, other government agencies, State of Alaska and Canadian government. (FY 1990 - $0.2M)	0.3

Plant and Capital Equipment

	FY90		FY91	%
	Request	Approps	Request	Change
Capital Equipment	$ 0.0	$ 1.5	$ 1.3	-13.3%
Construction	1.9	10.5	1.1	-89.5%
Total	$ 1.9	$12.0	$ 2.4	-80.0%

Capital equipment is purchased to replace obsolete equipment so that the ETCs and the National Laboratories analytical capabilities are constantly being upgraded. General plant projects are essential to the safe, efficient operation of the ETCs and construction is dedicated to a number of improvement, alterations and additions at each of the ETCs.

Capital Equipment	FY 1991 Request (in millions)
• Provide centralized funding for capital equipment needs at the ETCs, National Labs, and BPO. (FY 1990 - $0.5M)	$0.5
• Provide funding for additional computing capacity at Pittsburgh ETC to support new activities that include business and technical modeling, cost/price and financial analysis and tracking of contract deliverables. (FY 1990 - $1.0M)	0.7

Construction	
• Provide for General Plant Projects (GPP) at the ETCs and BPO. (FY 1990 - $1.8M)	0.5
• Continue construction of the program support facility at PETC. (FY 1990 - $3.0M)	0.7

BIOGRAPHY OF ROBERT H. GENTILE

Robert H. Gentile is the Department of Energy's Assistant Secretary for Fossil Energy, a position that oversees the Department's coal, oil and natural gas programs. He was sworn in as Assistant Secretary on February 27, 1990, after being nominated by President Bush on January 25, 1990, and confirmed by the U.S. Senate on February 22.

As Assistant Secretary for Fossil Energy, Gentile manages the federal government's programs to develop advanced coal, petroleum and natural gas technologies. Included is oversight of the $5 billion Clean Coal Technology Program, the government's largest single energy and environmental initiative. He is also responsible for managing the federal fossil fuel research programs which involve nearly 700 government-sponsored projects carried out by universities, private industry and federal laboratories.

Gentile also oversees the Strategic Petroleum Reserve, the nation's emergency crude oil stockpile, and the operation of the government-owned oil fields in California and Wyoming that make up the Naval Petroleum Reserves. He is also responsible for the federal government's authorization of imports and exports of natural gas and the export of electricity.

Prior to his service with the Department of Energy, Gentile headed the Office of Surface Mining Reclamation and Enforcement from March 20, 1988, to August 14, 1989, first as acting director, then as President Reagan's appointee. He has also served as Liaison for Coal Affairs to both the Secretary of the Interior and the Interior Department's Assistant Secretary for Land and Minerals Management.

From 1982 to 1986, Gentile was Chief Executive Officer of The Ohio River Collieries Group, a consortium of companies conducting coal operations, construction and land development, agriculture and trucking operations in eastern Ohio. For seven years prior to that, he was President of N&G Construction Company which became part of The Ohio River Collieries Group.

Gentile was a founding member of the Mining and Reclamation Council, a national trade association that has since become part of the National Coal Association. He has served on the Board of the Ohio Coal Energy Association and as a charter member of the National Coal Council, a private sector advisory panel to the Secretary of Energy.

From 1970 to 1975, Gentile was a Department of State Foreign Service Officer assigned to the Peace Corps. His assignments included three years as Deputy Director of Peace Corps Operations in Brazil.

Gentile holds a B.A. in political philosophy from Franciscan University of Steubenville, Ohio, and an M.B.A. in international trade and finance from the University of Toledo. He speaks several languages.

BIOGRAPHY OF MICHAEL R. McELWRATH

Mike McElwrath serves as Principal Deputy Assistant Secretary for Fossil Energy at the U.S. Department of Energy. His responsibilities include management of coal, oil, and unconventional gas research and development programs as well as the Naval Petroleum and Oil Shale Reserves and the Strategic Petroleum Reserve and overseeing the national Clean Coal Technology Program.

Prior to his appointment with the Department of Energy, Mr. McElwrath served a dual role for former Secretary Don Hodel at the Department of the Interior. He was Deputy Assistant Secretary for Policy overseeing all policy initiatives for the Department and was also special Energy Advisor to the Secretary. Given the Department of Interior's federal jurisdiction over mining, minerals, and coal, Mr. McElwrath added substantially to his extensive expertise in oil, gas, and energy.

Before joining the Reagan Administration in January 1988, Mr. McElwrath spent ten years as an oil and gas attorney in Midland, TX, during one of the most volatile periods in the nation's energy industry. He worked with all aspects of the energy industry including major corporations, wildcatters, service organizations, and consumer groups.

A native of Houston, TX, Mr. McElwrath received both his undergraduate and law degrees from the University of Texas at Austin. He is married to the former Patricia Northern. They have two sons, Mac and Sean, and reside in Arlington, Virginia.

BIOGRAPHY OF SUN W. CHUN

Sun W. Chun has served as the Director of the U.S. Department of Energy's (DOE's) Pittsburgh Energy Technology Center (PETC) since 1979. As such, he directs DOE's research and development efforts in coal programs including: Coal Preparation, Alternative Fuels, Advanced Combustion, Flue Gas Cleanup, Coal Liquefaction, and Magnetohydrodynamics. In addition, he oversees PETC's role in the Clean Coal Technology Program, and implements joint research programs with the Strategic Defense Initiative Organization and the U.S. Air Force.

Prior to his present position, Dr. Chun served as PETC's Deputy Director and Director of its Process Sciences Division. Before coming to PETC in 1975, Dr. Chun held management positions with the Gulf Research and Development Company, where he supervised and conducted research in coal liquefaction and hydrocarbon process technology.

Dr. Chun's professional training includes completion of Gulf's five-year management training program, DOE's two-year Executive Development Program, the Federal Executive Institute, the Systems Management College of the U.S. Armed Forces, and the Harvard University National Security Program.

Dr. Chun is a member of the American Institute of Chemical Engineers, the American Chemical Society, the American Management Association, the American Association for the Advancement of Science, Sigma Xi, and the Pittsburgh Federal Executive Board.

In 1983, Dr. Chun received the Diamond Jubilee Award for Outstanding Service from the American Institute of Chemical Engineers. He received the 1981 Benjamin G. Lamme Award for outstanding service from the Ohio State University, the highest honor from the College of Engineering. He also has many patents and numerous publications in petroleum refining and coal technology to his credit.

In 1988, Dr. Chun was awarded the Leadership Award from the Pittsburgh Coal Conference. In 1990, he served as Chairman of the Combined Federal Campaign for the Greater Pittsburgh area.

Dr. Chun received his Bachelor's, M.S., and Ph.D. degrees in Chemical Engineering from the Ohio State University. He and his wife, Inmook, have two children, Felicia and Edward. They reside in Murrysville, Pennsylvania.

BIOGRAPHY OF THOMAS F. BECHTEL

Thomas F. Bechtel serves as Director, Morgantown Energy Technology Center, Morgantown, West Virginia. He is responsible for the implementation of the U.S. Department of Energy fossil energy research and development programs in lead assignment areas designated for the Morgantown Energy Technology Center. These areas include research on coal conversion and utilization systems involving coal gasification, fluidized-bed combustion, gas turbine and diesel engine combustion, fuel cell applications, and associated cleanup systems necessary for system operations. He is also responsible for unconventional natural gas resources, oil shale and tar sands resource recovery. He is responsible for oversight of the Clean Coal Technology projects that fall within his technology assignment areas.

The mission of the Morgantown Energy Technology Center is accomplished through contracted research and in-house activities at the 147-acre site. The Center has earned international recognition as a quality fossil energy research institution. Annual research and development budget authority is about $200 million. He manages an organization of about 280 Federal employees with an additional 250 contractor support personnel. A satellite office in Laramie, Wyoming, is managed from the Morgantown Center.

From January 1986 to April 1990, Mr. Bechtel was Associate Director of the Morgantown Energy Technology Center's Office of Technical Management.

From 1981 to 1986 he was Vice President, Engineering; Vice President, Advanced Engineering and Technology; and Vice President, Product Service for General Electric's Environmental Services, Inc., which was formed by the acquisition of the Buell and Chemico Divisions of Envirotech Corporation. Prior to that, he was a design engineering manager for GE's gas turbine business.

Mr. Bechtel graduated from Lehigh University in 1958 with a BS in Mechanical Engineering. In 1960 he graduated from the University of Cincinnati, with a Masters Degree in Applied Mechanics. He successfully completed General Electric's Advanced Engineering Program, General Electric's Management Development Course, and General Electric's Business Management Course.

Mr. Bechtel is married with three adult children, and resides in Westover, West Virginia.

CLEAN AIR LEGISLATION

Chairman **Byrd**. There are significant differences in the Senate-passed clean air bill and the committee's bill that has been reported in the House. Would you at this time share with the subcommittee your thoughts on the Senate bill and the House version of the clean air legislation and how these bills will affect the objectives of the clean coal program?

Mr. **Gentile**. Well, Mr. Chairman, the administration does have some concerns especially on the House side. We are concerned about what has been referred to as the Sharp amendment and how it affects the clean coal program. That's a particular concern. We felt that in the Senate bill—if I can put on my hat as a technologist—we would have preferred different deadlines, but we also know that the President and the Senate were striving for a balance in the program, and although the deadlines are tight, we think that we can come close to meeting those deadlines.

As for the House bill, however, we are certainly concerned about the issue of the Sharp language. That is probably our most important concern right now, the Sharp amendment.

Chairman BYRD. And what are your concerns about that amendment?

Mr. GENTILE. Well, our concerns are about what it does to the clean coal program. First of all, it switches from being a national program to a regional program. It smacks of subsidy. It would take away all unobligated balances. It would mean that only the utilities owning the identified 107 plants that would come under phase I would be eligible. That certainly strikes to the very core of the clean coal program.

Chairman BYRD. Which of the two versions would be more compatible with repowering technology?

Mr. GENTILE. Mr. Chairman, we aren't sure what is going to happen in the House version on repowering. Every indication is that repowering would not be an attractive option under the Sharp amendment. We have very serious concerns about that. Utilities would be more prone in the target areas to use retrofit technologies. We think that places the intent of the clean coal program in serious jeopardy since it is those repowering technologies that mean so much to the future of this country in terms of coal utilization. It would be unfortunate to move away from repowering technologies.

Chairman BYRD. The House bill includes a provision that would limit the participants in subsequent clean coal technology project solicitations to the owners or operators of the 107, I believe—or was it 111?

Mr. GENTILE. One hundred and eleven?

Chairman BYRD. I thought it was 107, phase I plants. What is your assessment of that provision?

Mr. GENTILE. Well, it would mean that only those utilities who own those plants would be eligible for the clean coal program, and that essentially excludes about 80 percent of the utilities in this country. We have a problem with that. We also have a problem with the fact that it would no longer be a national program. Mr. Chairman, as you yourself said, it's important that these technologies get demonstrated. It is not so important where they get demonstrated. We feel that we have a balanced program that looks at energy needs east and west and this would seriously hamper that.

Chairman BYRD. It militates against the advanced technologies?

Mr. GENTILE. We think it does, yes.

Chairman BYRD. The long-term——

Mr. GENTILE. The long-term repowering types of technologies. It moves more toward the retrofits, the current nearer-term technologies. We feel that we need the repowering technologies in rounds 4 and 5 to really help this country as we move beyond the limits set by the cap.

Chairman BYRD. Are you expressing the Department's policy on that provision?

Mr. GENTILE. Yes, yes, Mr. Chairman.

Chairman BYRD. Has the Department always been opposed to amendments that would limit the playing field for clean coal demonstration?

Mr. **Gentile**. I believe so, Mr. Chairman.

EFFECT OF SHARP AMENDMENT

Chairman **Byrd**. There are some that would argue that the Sharp amendment would simply limit future clean coal demonstration funding to the Midwest which is the area of the country that is principally affected by the acid rain provisions of the clean air bill. Some view the Sharp proposal as a form of cost sharing to help the Midwest with compliance costs. What is your perception?

Mr. **Gentile**. We think it's a form of cost sharing. We have several concerns. It's clear that in many sections of the country the need for additional electric generating capacity would be precluded by the Sharp amendment. We see the Northeast, we see the West and parts of the South needing more generating capacity, and those areas would be virtually excluded from playing given the Sharp amendment. We see that as a serious problem. That is exactly why we see so many opportunities for repowering options occurring.

We also have concerns that many of the powerplants by the year 2000 will be 30 years old. We think we need repowering technologies and we have some real serious concerns about the way the amendment is structured right now.

Chairman **Byrd**. So, the Sharp amendment represents a short-term answer, but it has some very serious long-term downsides; is that correct?

Mr. **Gentile**. Yes, sir; it most certainly does.

Chairman **Byrd**. Are there other problems with the Sharp amendment?

Mr. **Gentile**. Well, we're concerned basically also that it excludes industry, it excludes the nonutilities. As you know, some of our clean coal projects, in meeting the Lewis-Davis intent, have not been just for utilities. We have also looked at the nonutility sector and this would exclude the nonutilities.

Chairman **Byrd**. Why do you think they should not be excluded?

Mr. **Gentile**. It was my understanding that, when the Canadian/United States agreement was struck, it was decided that it wasn't only the utilities that were causing the problems and that the clean coal program should not be designed to meet just utility needs but also nonutility needs. We have several projects—I can think of two steelmaking projects that are eligible under the clean coal program that would be precluded in the future. It's not just utilities that are having problems with pollution control.

Chairman **Byrd**. Are there other problems with the Sharp amendment? Does it withdraw clean coal funds which are not presently obligated?

Mr. **Gentile**. I think the most essential problem of the Sharp amendment is that it virtually takes away all unobligated balances and it would put in jeopardy many of the projects already selected. We are figuring right now that about 17 out of the 38 projects would be affected by this Sharp amendment.

Chairman **Byrd**. How would they be affected?

Mr. **Gentile**. They would no longer be eligible for funding since they either do not belong to one of the utilities that own the phase

I plants or their funds have not been obligated at the date of enactment.

Even with round 3—I've had discussions with Chairman Sharp—there were some questions even in round 3 whether the plants selected would be able to proceed with the projects, and now we seem to read that to mean that, unless the project is owned by one of the utilities owning the phase I plants they would no longer be eligible since there are no funds obligated.

PHILIP SPORN PLANT

Chairman **Byrd**. Would that affect the Philip Sporn plant?

Mr. **Gentile**. It may and it may not. Right now our reading is that it may not affect it since the owner is AEP, which is one of the affected phase I utilities. But I am not sure how we are reading that at this point. My understanding is that originally they took away all unobligated moneys, that, therefore, would affect the Sporn plant. But right now we are saying that it shouldn't.

Evidently in the preparation of the bill, the chairman structured it in such a way that projects would be excluded unless they were owned by one of the utilities owning one of the phase I plants or the funds were already unobligated. So, given that reading, when you use the "or" in there, it may mean that Sporn is not affected. But quite honestly, we are still having trouble understanding the intent of the Sharp amendment and that continues even after having meetings with the staff ourselves.

Chairman **Byrd**. Has DOE signed an agreement to provide American Electric Power $185 million in cost sharing at the Philip Sporn plant? Is the money obligated yet?

Mr. **Gentile**. No, sir; it is not.

Chairman **Byrd**. It is not yet obligated? Would it be withdrawn then under the Sharp amendment?

Mr. **Gentile**. Well, the operative word seems to be obligated, and it has particular meaning since the instrument that we use in the clean coal program is a cooperative agreement. So, the funds are not obligated until the agreement is signed, and, therefore, would be in jeopardy. However, from what we've been able to gather from the Sharp staff, because the Sporn plant is owned by American Electric Power which also owns some of the plants that would come under phase I, they, therefore, are eligible under the Sharp provision. But again, we are still having some trouble understanding exactly how this would work.

CLEAN COAL TECHNOLOGY—DELAY OF ROUND 4

Chairman **Byrd**. My amendment to the dire emergency supplemental appropriations bill would withdraw the Department's authority to issue a fourth clean coal solicitation this June, as you are presently required by law to do. Would you agree that proceeding with a fourth solicitation now would leave a lot of unanswered questions for the industry?

Mr. **Gentile**. Mr. Chairman, as much as I regret seeing a delay in the program because the deadlines are so tight. We need to bring these technologies on line as quickly as we can, but I must say that given the confusion that we're facing right now, and most certainly industrial participants would be facing that same confusion, I would say that it makes good sense to delay this until we can straighten out some of the uncertainty.

Chairman **Byrd**. But a delay preserves the Appropriations Committee's jurisdiction over these clean coal funds. It makes it clear that we will be the ones to recommend to Congress how these funds should be used.

Assuming that Congress completes action on the clean air bill this fall and that the fiscal year 1991 Department of the Interior and Related Agencies bill redirects the Department to proceed with the fourth solicitation this November 1, would the resulting 5-month delay have a seriously detrimental effect on the clean coal program?

Mr. **Gentile**. Again, Mr. Chairman, I think what we're facing here is that, as I put on the hat of a technologist who is facing a deadline in the clean air bill, I would hope to see our technologies come on line as quickly as possible. Every day that we delay at this end is a day delayed at the other end.

However, given the uncertainty that we're facing, I don't think that we would jeopardize our program substantially for a 5-month delay period.

Chairman **Byrd**. Wouldn't any negative effects be more than offset by the benefit that by November industry should have definite knowledge of the specific requirements of the clean air bill?

Mr. **Gentile**. Yes, sir; I do think that. Right now I am sure that there is an incredible amount of uncertainty out there. If we're uncertain, I am sure the industrial participants that would be involved in our projects are much more uncertain than we are. I would think that anything we can do to reduce that uncertainty would be beneficial to the program. If that means a delay, then I would rather see a short-term delay to get some of these things resolved.

STREAMLINED PROCEDURES

Chairman **Byrd**. Are there administrative procedures that the Department could employ to shorten the timeframe to process the fourth solicitation?

Mr. **Gentile**. I'm not sure, Mr. Chairman. We have drastically streamlined the process. I know the Admiral made a commitment to you and some other members this fall to streamline that process. That streamlined process is working and it is working rather well. To what degree we can streamline it even further I am not sure. The solicitations are very complicated and they take a good deal of time to analyze. We would not want to skimp on that. But we would be looking toward any streamlining we can do because as I said, any day that we delay at this end is a day that we have to pay for at the other end.

Chairman **Byrd**. So, the solicitation period and the evaluation period, you feel, could not very well be reduced?

Mr. **Gentile**. Well, if we reduce our solicitation period it puts constraints on the industrial participants in terms of time to develop their proposals. I would be somewhat reluctant to do that. I wouldn't want to jeopardize the quality of the proposals that we get, nor would I want to jeopardize the scrutiny that we give proposals. If we can in any way save some time here and there, we would be looking forward to doing that. And believe me, if the round 4 process is delayed, we will go back and see where we can save a day here or a day there to make that process work quicker.

Chairman **Byrd**. Might a delay in the fourth solicitation until passage of the bill cause many more companies to apply for clean coal funds since they would then be faced with the certainty of more stringent emission regulation by a date certain?

Mr. **Gentile**. Well, I think that would depend on how the bill comes out in final form. But I have no doubt that having a bill certainly would be an incentive to companies to participate in the program, if those companies are interested. I think that right now there are those who are concerned about the uncertainty. There is nothing in the business world that strikes more fear in one's heart than uncertainty. When you look at the conservative nature of utilities, they are faced with that problem even more so. So, I would say that, with the certainty of a bill, we would probably have more players and more incentive to become players.

GAO STUDY OF CLEAN COAL TECHNOLOGY PROGRAM

Chairman **Byrd**. All right. Let's talk now about the recent analysis of the Clean Coal Technology Program by the General Accounting Office. In their March 1990 report entitled "Pace and Focus of the Clean Coal Technology Program Need to be Assessed," the GAO concluded, based on its assessment of the program's second round project selections, that the Department of Energy should delay future solicitations until the results of some earlier demonstrations are known.

How long will it be until a representative sampling of previously selected projects could be completed?

Mr. **Gentile**. We have data coming in now, but it will probably be a couple of years before we really get meaningful data. The program wasn't structured to get data at each step before making the next decision. If we did that, our program would have to be stretched out for a considerably longer period of time. But we do have I think at least three clean coal projects that we are getting data from right now. It will probably be a couple of years before we really get meaningful data, even on round 1.

I have in front of me the dates, the time lines for these projects. It looks like the data for the bulk of the projects will be coming in in 1991 and 1992. That's both clean coal I and II. The repowering technologies would take much longer.

Chairman **Byrd**. How much longer?

Mr. **Gentile**. We are probably looking at about 4, 5, or 6 years.

Chairman **Byrd**. What effect would a delay of that length have on the clean coal program?

Mr. **Gentile**. Well, it would drastically stretch out the program. We certainly wouldn't have those technologies available in the immediate future, maybe not even this decade, if we stretched it out to that degree. I know, for example, that with this talk of pressurized fluidized bed, the TIDD plant is scheduled to come on line around October of this year. It is going to run, I think, for 2 years.

I think that about 4,000 hours of operations which is the projected run in the test program. If we waited for that to be concluded and analyzed all of the data before we took the next step, it would mean that the next scale-up of PFBC technology wouldn't occur for probably 5 years. We don't think that that's necessary. We think that when we start seeing the results of those demos that we can adjust the design phase to take care of the next scale-up PFBC.

DOE REACTION TO GAO REPORT

Chairman **Byrd**. Well, how do you feel then about the GAO's conclusion that the Department should delay future solicitations?

Mr. **Gentile**. I think they're wrong.

Chairman **Byrd**. What do you think the basic premise of the GAO recommendation is?

Mr. **Gentile**. I don't know. I'm not quite sure what the report was getting at. We did not have the opportunity really to reply to the draft report. Although many of the statements in the GAO report are factually correct, they are certainly out of context. I am not sure how carefully GAO took a look at what our program was attempting to do and how it was attempting to meet the objectives of Lewis/Davis. We will be responding to the GAO report in detail because we have some major problems with the way it is constructed.

Chairman **Byrd**. How would you respond to it here?

Mr. **Gentile**. I think we could answer some of those points. The GAO talked about several things. One, they said that 12 of the projects—out of the 16 projects selected, were weak in meeting one or more of the comprehensive evaluation criteria. Well, the criteria were developed to take into consideration the projects that best supported the recommendations of the Lewis/Davis report. It was never intended that every project would be perfect in every aspect. We intended to select those projects which were the strongest, which offered a suite of technologies, and which had the best chance of succeeding commercially. On such considerations, we made our decisions.

The report said that nine projects had limited potential for reducing nationwide emissions from coal burning facilities. Well, included were four NO_x control projects. These technologies are consistent with Lewis/Davis recommendations, even though GAO seemed to focus only on the Clean Air Act implications. We are looking not only at today's Clean Air Act, we are looking at the longer term. We are looking at where this country is going to go after the year 2000 for the next generation of electricity generation capability. We don't think the GAO focused on those issues.

Three projects were said to have been weak in commercialization potential. Well, there were some projects that were weak in one criterion or another, and in the negotiation process we tried to work out that weakness and help strengthen the program. So, quite honestly we think the report was off base and we will be going through that report point by point, project by project and refuting where necessary or agreeing where necessary.

Chairman **Byrd**. When would you be doing that?

Mr. Gentile. We hope to have that done in the next few weeks, sir.

Chairman Byrd. Supply the subcommittee with your analysis, would you please.

Mr. Gentile. We'd be happy to. Yes, sir, we will.

[The information follows:]

REPORT EVALUATION

General Accounting Office (GAO) Report GAO/RCED-90-67, Entitled, "Fossil Fuels: Pace and Focus of the Clean Coal Technology Program Need to be Assessed"

BACKGROUND

Near the end of March 1990, the GAO released its Report GAO/RCED-90-67, entitled, "Pace and Focus of the Clean Coal Technology Program Need to be Assessed." This report presents the results of a study performed by GAO in response to a request from the Chairman, Subcommittee on Energy and Power, House Committee on Energy and Commerce. The purpose of the review was to:

> "Review DOE's criteria and process for evaluating and selecting Round II projects."

As a result of the review, GAO reports a number of principal findings and provides the following suggestion entitled, "Matters for Consideration by Congress:"

> "Given the current status of projects in the Clean Coal Technology (CCT) Program and in view of the Nation's current budget constraints, Congress may want to consider amending the CCT Program of Public Law 101-121 to direct the Department of Energy (DOE) to delay requesting proposals and selecting projects for rounds-four and five of the program until it obtains additional demonstration results from projects already in the program."

As the report does not contain any recommendations for action to be taken by DOE, a formal response to Congress is not required. However, the large number of apparent conflicts between findings and conclusions, an unsupported suggestion for Congressional consideration, and overall negative tone that the report conveys suggests that DOE might want to take the initiative and address some of the comments made in order to provide a more balanced treatment of the subjects addressed.

DISCUSSION

A close reading of the report results in a number of observations:

- o The scope of the report extends well beyond the Congressional request or the reported purpose of the review (i.e., DOE's criteria and process for evaluating and selecting round-two projects).

- o The subject matter of Chapter 2, "DOE's Criteria and Process for Evaluating and Selecting Projects," is well prepared and, in itself is fully responsive to the Congressional request. The uncontested conclusion presented at the end of this chapter states:

  > "The criteria that DOE developed for evaluating round-two project proposals adequately considered congressional and other program guidance, and the comprehensive evaluation process that DOE established resulted in project proposals being consistently and thoroughly evaluated. The DOE used the evaluation results, together with several broad program policy project selection considerations to pick the highest ranked projects for a variety of different technologies that it wanted to see demonstrated."

- o Most of the issues of concern to the CCT Program and DOE in this GAO report are found in Chapter 3, entitled "Best Projects Were Selected, But Many Have Limitations in Meeting DOE's Evaluation Criteria." This chapter, by contrast, is so different from Chapter 2, that it appears to have been written by a second group. Specific comments on this material are:

- The section titles may be accurate as phrases taken out of context, but convey a negative impression not supported by the associated text.

- The material presented is well beyond the scope of the Congressional request.

- The evaluations and comments, for the most part, only represent GAO's efforts to "second guess" the results of DOE's implementation of the selection process and the comparative merits of the projects selected.

  -- Valid counter arguments exist for each point made by the GAO (see Appendix A).

- The analysis does not consider or apply most of the guiding principles of competitive solicitations earlier defined in Chapter 2 and used for evaluating the efforts of DOE's Source Evaluation Board in the selection process.

- Two of the three conclusions presented for this chapter are based upon GAO's evaluation of DOE's selection process. As shown below, these conclusions give mixed impressions about the merits of the projects selected and their ability to accomplish the goals of the solicitation. They also ignore the scope of the guidance given to DOE by Congress.

  -- Conclusion:

  "Although most of the selected round-two projects fell short of meeting all of DOE's proposal evaluation criteria, they were the best projects submitted for the mix of technologies that DOE was interested in seeing demonstrated. However, many of the technologies selected for demonstration may have limited potential for achieving nationwide emission reductions when used at existing coal-burning facilities. Also, some of the selected projects may have difficulties in successfully demonstrating and ultimately commercializing their technologies.

  -- Conclusion:

  "With the emission reduction emphasis placed on the round-two solicitation, DOE could have selected more projects with greater potential to meet the emission reduction criterion. However, if DOE had picked more projects with greater potential to reduce nationwide emissions from coal-fired facilities, it would have resulted in: (1) the selection of lower ranked projects demonstrating technologies similar to the projects that were selected and (2) projects selected which may not be successfully demonstrated or commercialized because of weaknesses in other criteria."

- These conclusions do not support the overall negative impressions about the program the reader acquires when reviewing the material in the chapter.

o Of most concern, however, is the extent and nature of the material presented by GAO to support its statement, "Matters for Consideration by Congress" that suggests that Congress may want to direct DOE to delay rounds four and five.

- Three short paragraphs located at the end of Chapter 3 in a section entitled, "Funding of Future Rounds" is the only material presented in the report that supports the GAO comment.

- These paragraphs present unsupported observations of GAO. They are essentially a GAO opinion and do not contain any actual basis for the conclusions made.

- The third conclusion in Chapter 3 (stated in full below) proposing the delay is subjective, expresses GAO's unsupported opinion and certainly is debatable.

  -- "The DOE plans to request round-four project proposals in June 1990 and the fifth and final round in 1991. However, in view of the current status of the projects already in the program, and the problems experienced to date, we believe that Congress needs to evaluate the pace and focus of rounds four and five of the program. It seems that an evaluation of the results of some of the current demonstration projects is needed before DOE solicits and selects additional projects under rounds four and five of the program. This would allow DOE to make more informed decisions regarding the identification, selection, and funding of the more promising technologies in future rounds of the program and help ensure that the funds allocated to this program are effectively and efficiently spent."

SUMMARY

The purposes of the Congressional Request for this GAO review are accomplished by the material and conclusions of Chapter 2 of the report. In this chapter, the analysis of GAO is well done and the conclusion is supportive of DOE's efforts in the evaluation of the proposals submitted and the projects selected in round-two of the CCT Program.

The material contained in Chapter 3 of the report is an extension in the scope of the effort that carries GAO well beyond their assigned task. The comments made by GAO become considerably more subjective than objective and the presentation is more suggestive than accurate. The assessment does not consider the full extent of Congressional guidance to DOE or the requirements of the competitive solicitation process.

The title of the report and the material it reflects is the most limited and subjective part of the report. In essence, it reflects GAO opinion and is not related to the objectives of the review as outlined by the Congressional request. Unfortunately, GAO's suggestion to Congress and the report title are based on this very small section of the report.

ADMINISTRATIVE IMPROVEMENTS TO PROGRAM

Chairman BYRD. We all are in favor of getting a good return on our Federal dollars, whether the funding goes to clean coal technology demonstrations or medical research or whatever. But, at the same time, the coal industry is faced with very strict emission limitations in this decade. So, time is precious. Technical developments must come quickly if they are going to make a contribution.

Can you provide statistics that indicate improvement in the administration and execution of the Clean Coal Technology Program over time?

Mr. GENTILE. Yes, sir; I think we can. As we looked at what we've done in the several rounds of the clean coal program, as you're well aware of Mr. Chairman, no program as challenging and complicated as the clean coal program could get off the ground without some difficulty and glitches. There is no question that round 1 was a learning experience both for the industrial participants and for ourselves. The industrial participants had a very short time period in which to put forward proposals. There were problems in obtaining financing. We had seven projects drop out of round 1. In round 2 the Department made adjustments. We lengthened the time for preparation of the proposals. As a result of the changes made in round 2 we have had only one project drop out to date. In round 3, further adjustments were made and, from what we've heard in the recent round of public hearings, round 3 is the most successful round yet. There's no doubt that not only have we learned by experience, but I think industrial participants have also learned not only what's expected, but how to write a proposal that gets the Department's attention.

So, I think that by having gone through three rounds of this program, the Department has shown great flexibility in trying to adjust the program to make it work. I think we have learned a lot in the process.

Chairman **Byrd**. Have the cost-sharing levels improved?

Mr. **Gentile**. Yes, sir; I think we are running right now at about 60 to 62 percent from industrial participants in the program overall. I think our contribution right now in the first three rounds is 38 to 40 percent. Cost sharing has been about the same in every round. I think we are getting more bang for our buck than Congress anticipated.

PROJECT SELECTION

Chairman **Byrd**. In your selection of projects have you sought to select those for which effective technologies appear to be available? Do you select those that are more likely to succeed?

Mr. **Gentile**. We try to select those projects that are environmental performers and that have commercialization potential. The program would serve no one's purpose if we were funding projects that were wonderful projects but did not have the ability to be commercialized. So, we are trying to make sure that, when we end this program, that we will have a broad array of technologies out there available for utilities to make the decisions that they must make as they face the next couple of decades.

Chairman **Byrd**. I believe the GAO charged that many of the projects selected in the second solicitation had limited commercial applicability and, therefore, would lead to only modest emission reductions even if the demonstrations are successful. Do you have any comments?

Mr. **Gentile**. I think that, what we're getting at, sir, is the fact that there were some projects selected during that round that did not maximize reductions in acid rain emissions. These projects were industrial efforts and were not what the GAO felt were important to dealing with the Clean Air Act. We, however, feel that the industrial projects are very important in terms of the long-range basket of technologies that we need to make available. I think that we were also looking at specific market niches. We were looking at some of the industrial markets. We were looking at cyclone boilers, concrete, and steelmaking. So, we looked at several different things.

Again, the GAO seemed to focus on how the clean coal program was dealing with the Clean Air Act. Well, that's not our entire mission. That's only one part of our mission.

Chairman **Byrd**. Thank you. Congress directed the Department of Energy to demonstrate a broad array of technologies applicable to a wide range of domestic coals at diverse geographic locations.

The original broad selection criteria which Congress required was based on the development of a suite of technologies to serve the entire Nation. However, the acid rain provisions of both the Senate and House clean air bills limit the range of affected plants to utilities. Industrial facilities may enter the allowance process on a voluntary basis.

This was not meant to be just a subsidy for compliance; right?

Mr. **Gentile**. Right, sir.

INDUSTRIAL PROJECTS

Chairman **Byrd**. Given this situation, should subsequent clean coal solicitations be limited, then, to utility projects or not?

Mr. **Gentile**. Clearly, we were facing a significant problem in this country with utilities in terms of aging plants, and not having enough plants in construction and design to meet needs. The new plants are going to have to be environmental performers. But, it's not just utilities that are affected by emissions problems, and we were trying in this program to provide a broad range of technologies not just to utilities but also to the industrial market. So, we are looking at a whole series of things—everything from steel to concrete. There was one project in my home area and your home State, the Weirton project that unfortunately failed. Rather, was withdrawn. It was never our intent to focus only on utilities.

Chairman **Byrd**. Are you trying to carry out what was the clear intent of Congress in support of the program?

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. Do you think then—and I take it that you do from your answer—that industrial projects should also be eligible for funding, from clean coal 4 and 5.

Mr. **Gentile**. Absolutely, sir. We've clearly selected industrial projects in the first three rounds and we would hope that that would continue in rounds 4 and 5. We firmly believe that the intent of the program is to present a broad range of technologies that are commercially viable, not just to utilities, but to all of the players that use coal and that those should represent the national interest and not just local interest.

Chairman **Byrd**. Well, you're looking at it from the long-run view and that's what we've got to keep in mind, not just the short term. Long term.

REPAYMENT PROVISIONS

Turning to the details of the fourth solicitation, how would the repayment provisions in that round differ from those in earlier clean coal solicitation?

Mr. **Gentile**. We are still currently looking at the repayment provisions. We've had a series of public meetings to discuss the issue. We've also had some meetings within the Department and also with congressional staff. That issue has not been resolved yet.

Chairman **Byrd**. Is there some suggestion that their repayment levels be increased?

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. What is the rationale? That would dampen private sector enthusiasm for the clean coal program at a time when the clean air bill is certainly going to make it more difficult and expensive to use coal in the future. Why would the administration try to add further impediment to the use of coal in an environmentally acceptable manner by increasing the repayment level?

Mr. **Gentile**. I think, Mr. Chairman, it was felt that the U.S. taxpayers were making an investment in this program and if a project was to become profitable then the U.S. taxpayers should be entitled to receive their money back. I think that was the intent, sir.

Chairman **Byrd**. Does the Department have any other programs with comparable levels of private sector cost sharing for projects that embody the complexity and the risk of this one? I think we have to consider the complexity and the risk similar to those in the clean coal program?

Mr. **Gentile**. To my understanding, Mr. Chairman—I have been asking that question recently myself, not being that familiar with the Department, but I don't really think that there are any other programs in the Department that have that level of industrial participation or that have that level of success. But that's my cursory opinion based on a couple of months exposure to these programs.

Chairman **Byrd**. But with such risk involved it seems to me that additional cost would dampen the private sector's enthusiasm to enter into those risks if we increase the repayment level.

Mr. **Gentile**. That's quite possible, sir, yes.

Chairman **Byrd**. It's because that there is a pot at the end of the rainbow that we're willing to launch out on those voyages that entail the greatest risks. And if we remove that pot at the rainbow's end then we dampen the mariner's courage and his nerve, his enthusiasm for charting the new course.

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. I don't think the Department should discourage potential clean coal project sponsors at the very time when we ought to be encouraging them most. If I cannot have assurances that the recoupment provisions of clean coal 3 will be continued fully in the next solicitation, I will seek bill language to ensure that the Department gets the message. Will that help any in resolving the matter downtown?

Mr. **Gentile**. We try to obey the law, sir. I will certainly take that message back.

Chairman **Byrd**. I do not believe that the best interests of the clean coal program are served by a proposal to increase project cost recovery at a time when more than ever, the Nation needs to turn to clean coal technologies as the answer to our energy and environmental equation.

Now, I just have a few more questions.

I think the distinguished Senator from Alaska has questions—I will yield to him.

Senator **Stevens**. Will there be time to yield there?

Chairman **Byrd**. Yes.

Senator **Stevens**. I do have another meeting. I just dropped by because I know that you were going to go into the Clean Coal Technology Program and I think the Department ought to realize that were the tables turned and this Senator was the chairman, you wouldn't have heard anything different from me. We have one-half the coal in the United States, as you know, and I think Senator Byrd has been very correct describing our intent concerning this program and the necessity for it to go forward on a basis of some incentive or it is not going to be successful.

Really, this is the perfect time for me to make a comment. I think you gentlemen are trying, but I do hope that you do not think about the clean air bill. The clean air bill is one thing. Support for the diversity of a strong and vibrant Clean Coal Technology Program is entirely different. I'm of the opinion that there has to be a great deal more diversity in it. We have a long way to go and none of us see any breakthroughs now in other areas.

OIL SHALE

You're not taking this into oil shale are you?

Mr. GENTILE. No, sir.

Senator STEVENS. You're not going to have oil shale at all in your program?

Mr. GENTILE. Yes; we do have oil shales in our program, yes, sir.

Senator STEVENS. But not the clean coal technology group?

Mr. GENTILE. No.

Senator STEVENS. I think the time is going to come where you have to come in more robust in that activity too if we don't get some additional discoveries with and even that would be temporary.

I am entirely for it. I hope that you do consider putting it in the bill. I have come to the conclusion that legislative history is just that, it's history. No one pays much attention to it. Senator, it has to be in the bill if they are going to pay attention to it. I would join you and putting it into law. I think we must preserve the incentive factor of your program.

Thank you very much.

PHILIP SPORN PLANT

Chairman BYRD. Thank you, Senator.

If I had any doubts before the Senator from Alaska spoke, I am sure it is indubitably clear now that I was right when I said that language should be in the bill if necessary. Hopefully now, doubly so, that should help in resolving the matter down in the premises of the offices of the Department of Energy.

Thank you very much Senator Stevens.

A few weeks ago I had the pleasure of hosting officials from the Department and the American Electric Power Co. during the signing ceremony for the cooperative agreement on the Philip Sporn Clean Coal Technology Demonstration Plant. The Department has pledged $185 million or 30 percent of the $660 million cost to construct and operate this plant during the 3-year demonstration phase. Would you describe the advantages that this pressurized fluidized bed combustion technology offers over a conventional pulverized coal plant?

Mr. GENTILE. Sir, there are several advantages first of all in terms of pollution control in the SO_x and NO_x reduction and also in terms of increased efficiency. Increased efficiency does a couple of things. One, in terms of thermal efficiency, of course, it reduces whatever impact there may be on global climate change. Second, it also means that we can get more electricity for our dollar, hopefully. So, we are looking at a power system that has the potential of being a good economic performer and a good environmental performer, not just in terms of the Clean Air Act but also in terms of global climate change.

We see SO_2 would be a 95-percent plus reduction and a NO_x reduction of 90 percent. So, we are looking at significant reductions here. We think that PFB is one of the more exciting technologies. I had the personal pleasure of crawling around the TIDD pressure vessel before it was put together. It is a very exciting technology. And the Sporn plant is the scale-up of that process.

Chairman BYRD. How would the power costs from a typical commercial PFBC unit compare with the cost from a standard pulverized coal unit with a scrubber?

Mr. GENTILE. The capital cost for a PFB facility is about $1,200, and kilowatt cost of somewhere between $1,100 to $1,300 per kilowatt hour. A standard plant with a scrubber is in the $1,500 to $1,600 range. So, it is a cheaper, more economical and better environmental performer.

Chairman BYRD. Would those savings be true of the Philip Sporn plant?

Mr. GENTILE. Yes, sir; we think they will be. In the demo stage it will probably be more expensive to run. In the long term that type of plant will be economical. Is it going to occur in the first phase, in the first step? No; it won't. I mean, the first step of any technology is the most expensive. Does it have that potential? Yes; we think it does.

Chairman BYRD. How will the costs in the instance of the Sporn plant compare with the cost of a typical PFBC plant once the technology is commercialized?

Mr. GENTILE. Tom Bechtel is telling me that it is going to be about $1,800 to construct, but when you get into the long-term life cycle you are looking at closer to $1,400 or $1,500 which is——

Mr. BECHTEL. That is the second generation of the technology, where they overfire the gas turbine and get more power out. I think when they were in here they were showing that technology in the demonstration—you'll get that down, but not to the kind of numbers that Bob was talking about, to $1,200 kilowatt. It will step down——

Mr. GENTILE. This is Tom Bechtel speaking, the Director of the Morgantown Energy Technology Center.

RECOUPMENT OF FEDERAL INVESTMENT

Chairman BYRD. Just so that we might close out our discussion of recoupment, the Department's past recoupment efforts may unfairly disadvantage the cooperating utility and its customers. Compared with conventional technology, a utility assumes higher risk and higher cost when it embarks on a clean coal demonstration. At first glance and on the surface it may seem fair for the Department to recover its cost share when a project is successful. After all, if the plant is successful, there is by definition no longer any risk for that demonstration plant. But when the risk has been avoided, the utility still must suffer from the higher demonstration unit costs.

If the Department is truly trying to advance clean coal technology demonstrations, it seems to me that the program should be designed to shield a participating utility and its customers from both the increased risk and the higher costs inherent in any demonstration program projects.

Would you please deliver to the subcommittee within the next month, for each clean coal project negotiated to date, a report which analyzes the effect of the demonstration projects' costs on electricity rates and how this effect compares with the rate impact if conventional options had been chosen to achieve the same level of emission reduction and/or power production. I would also ask for an analysis of the options available to the Department of Energy to eliminate any cost increases to the utility or its customers as a result of clean coal demonstrations. Can you supply that information within 30 days?

Mr. **Gentile**. Yes, sir; we will.

CONSTRUCTION AT MORGANTOWN

Chairman **Byrd**. In the past few years the Congress has appropriated funds in the Fossil Energy R&D Program for the construction of two buildings at Morgantown, one at the university and one at the Energy Technology Center. What is the construction status of these two buildings?

Mr. **Gentile**. My understanding, sir, is that the one at Morgantown will begin late this calendar year with construction finalized hopefully the first quarter of next year. Meanwhile, I believe that the building at the university although fully funded, is not scheduled to be completed until late 1991.

Chairman **Byrd**. Would you state the response again, Mr. Bechtel?

Mr. **Bechtel**. The building that's going to house the National Research Center for Coal and Energy is scheduled to start this fall. They did some initial ground preparation for it when they were building their Engineering Research Lab because that building sits right adjacent to the Engineering Research Lab on campus. But the ground breaking for the building itself I think is scheduled for this fall.

Chairman **Byrd**. What's the total cost of the building?

Mr. **Gentile**. $15 million from DOE.

Mr. **Bechtel**. That's not all in the building. About $5 million of that is for equipment in the laboratories.

Chairman **Byrd**. Total Federal cost would be how much?

Mr. **Gentile**. $15 million.

Chairman **Byrd**. $9 million coming from WVU in cost sharing?

Mr. **Gentile**. WVU or the State.

Mr. **Bechtel**. Both the same thing.

Chairman **Byrd**. Do you have adequate funds to complete the building at the Technology Center?

Mr. **Gentile**. Yes; we do.

Chairman **Byrd**. How about the Fuels Utilization Building on the university campus. Do you have adequate funds to complete that facility?

Mr. **Bechtel**. I am not sure which building you are referring to, Senator.

Mr. **Gentile**. Is that part of the other building?

Mr. **Bechtel**. The National Center Building?

Mr. **Gentile**. Yes; that's included in the same, I believe.

Mr. **Bechtel**. In that grant.

Mr. **Gentile**. Yes.

Chairman **Byrd**. The original proposal calls for the provision of an additional $8 million in equipment to outfit that building and related laboratories as part of the overall National Research Center for Coal and Energy at the university. Is that correct or incorrect?

Mr. **Gentile**. We put $15 million in, $6 million in 1988 and $9 million in 1989 which was the DOE share of the $24 million and that was for both buildings included in what's called the National Research Center for Coal and Energy.

Chairman **Byrd**. What was the estimate to equip the center?

Mr. **Gentile**. Included in that $24 million is $19 million in construction and $5 million in equipment.

Chairman **Byrd**. So, the estimate was what?

Mr. **Gentile**. Construction was $19 million, equipping it was another $5 million for a total of $24 million of which we're looking at the total of $15 million from the DOE and $9 million from the State or WVU.

Chairman **Byrd**. Is that amount included within the funds that you have provided to the university?

Mr. **Gentile**. Yes.

Chairman **Byrd**. Has Congress appropriated all of these yet?

Mr. **Gentile**. Yes.

Chairman **Byrd**. Are you saying that no additional moneys are needed for equipment?

Mr. **Gentile**. My understanding was that the construction project was going to amount to $24 million, $19 million of which was for the construction and $5 million for the equipment. I thought that that was all inclusive.

Chairman **Byrd**. Mr. Bechtel, do you know?

Mr. **Bechtel**. I honestly don't know, Senator. That project is being administered through the Chicago operations office, not through our office. I don't have the financial——

Mr. **Gentile**. I will certainly look into that for you, Mr. Chairman. That's the best information that we have and we will look into it with the Chicago office.

[The information follows:]

West Virginia University National Research Center for Coal and Energy

In 1987, the Office of Fossil Energy (FE) received a proposal for $26 million to build an Energy Center on the campus of West Virginia University. The proposal which had requested Federal participation, was declined by FE due to funding constraints. However, the fiscal year 1988 appropriation included $6 million as initial funding to begin construction of the Energy Center and an additional $9 million was appropriated in fiscal year 1989. DOE Grant DE-FG02-88FE61539 was awarded in July 1988 to West Virginia University with a total estimated cost of $24 million for the project, and DOE's negotiated share was $15 million. The University was to provide the remaining funds of $9 million. The University is constructing several buildings (four), which combined will be called the National Research Center for Coal and Energy. DOE is currently only involved in the Fuel Utilization Research Laboratory (FURL) which is funded with the $15 million grant funds. Construction of FURL will begin in the summer of 1990 and completion is scheduled for October 1991.

The Office of Fossil Energy has not requested any funding in the fiscal year 1991 budget for the National Research Center for Coal and Energy, however, the University requested $8 million over the next two years for equipment to furnish FURL and the Pressurized Systems Testing Laboratory (PSTL), which is part of the Research Center.

Fossil Energy's policy is to carry out research and development programs in existing facilities. These facilities consist of those currently in existence at the Energy Technology Centers, the National Laboratories, various universities, and the contractors with which the Department of Energy has contracts for research and development. The Department believes that the request for equipment for the West Virginia University facility would not be compatible with the current DOE budget priorities and with competitive procurement practices.

NATIONAL RESEARCH CENTER FOR COAL AND ENERGY

Chairman **Byrd**. The staff is telling me that there is $8 million more needed to equip the National Research Center for Coal and Energy; is that what you're saying?

Mr. **Gentile**. Mr. Chairman, we'll look into it and get right back to you on it. We should be able to get an answer for you this week.

Chairman **Byrd**. Well, you should have the answer now.

Mr. **Gentile**. Sir, I don't know the answer to that.

Chairman **Byrd**. All right. The original request was for $32 million for the building and equipment. Twenty-four million dollars has been provided to date of which $9 million was from the university and $15 million from the Department. That is $24 million and that leaves $8 million according to the old math and the new.

Mr. **Gentile**. Yes; that works with my pen too.

Mr. Chairman, I will certainly look into that. I was not aware of that.

Chairman **Byrd**. Well, if you need $8 million more dollars, shouldn't we provide it?

Mr. **Gentile**. Yes, sir; we'll look into that and get back to you right away.

Chairman **Byrd**. West Virginia University is doing some fine work in alternative fuels R&D for the Department's Energy Conservation Office and the university recently won a large research contract in your own geosciences research program. So, there is a lot of good talent in Morgantown and at other State schools as well. I intend to work to see that those research specialists at the university have the equipment that they need to help you, and to help the Nation to develop and use our domestic energy resources in an efficient and environmentally sensible manner. So, you will get back to me on the $8 million?

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. And find out what happened to it. How did it drop between the cracks?

Mr. **Gentile**. We will find out.

ENERGY TECHNOLOGY CENTERS

Chairman BYRD. You have brought with you today the directors of the Energy Technology Centers at Morgantown and Pittsburgh. As the fossil energy research managers in the research field, they are the ones who work directly with industry on the solutions to America's fossil energy supply and utilization problems.

You introduced these two gentlemen earlier. I would like to ask them now to provide some generic examples of how they ensure that the research that is conducted or managed by the organization is relevant to industry's needs, to the national energy interest, and is an appropriate Federal investment.

Dr. Chun, do you want to start first while Mr. Bechtel is getting loaded for bear?

Dr. CHUN. Well, the Energy Technology Center has been the leading laboratory in fuel technology R&D and we have a long history of contributions from our technology from the days of coal mine disasters through the fifties and sixties into the seventies and eighties.

Today we perform our own in-house R&D and the scientists are also participating in national project management. So, our staff in its entirety is working very closely together to execute a Clean Coal Technology Program, a coal R&D program and an in-house R&D program.

Today I am happy to report to you that out of the 30 clean coal technology projects that have been assigned to the Pittsburgh Energy Technology Center, only 2 of them dropped out on their own and the other clean coal projects are progressing very smoothly in terms of negotiations. The clean coal 2 projects, out of 13 of them 12 are going very, very smoothly. Two of the clean coal 1 projects are completing their work sometime during the summer. We have heard there are problems with the clean coal programs, but these problems are with only two projects and so the others perform their tasks very successfully and we are very happy to report to you that these projects are moving along very, very nicely. We will continue to combine all the resources for the project management people, and in-house R&D people to make sure that the projects are managed properly.

Chairman BYRD. Mr. Bechtel.

Mr. BECHTEL. I want to thank you for the breathing space.

The major focus at Morgantown on appropriations that ensures relevance is that we require substantial participation from our industrial sector contractors even when they are just R&D contracts. That gets the serious attention of their management. We spend a lot of effort in ensuring that small companies with bright ideas are given an opportunity to interact with many of the major companies or contractors that have the ability to take those ideas to market. We spend a lot of time in helping to create those marriages in cases where the small companies don't have a broad technology base of their own.

We tend to use our in-house research organization to work on new ideas that we can quickly turn over to private sector implementers and to work on market barrier problems that the private sector is having difficulty with. One example of that was related to the project where AEP was so concerned about particulate capture that they started the R&D test facility to complement the clean coal project and have just recently selected two concepts that will be tested there a year at a time in parallel between coal projects, with the idea of being able to use those advanced high cost cleanup systems once more if they prove out. Our in-house people were intimately involved in those tests and in preliminary tests working closely together. So, we try in every way we can to integrate in a proper fashion our in-house people, our small business contractors, and the major contractors in the clean coal program. So, we do push commercialization.

Chairman **Byrd**. How long have you been at the energy technology facility in Morgantown?

Mr. **Bechtel**. Since January 1986.

LIQUID FUELS STUDY

Chairman **Byrd**. Let's talk about the liquid transportation fuels study. Would you summarize the findings of the National Research Council report?

Mr. **Gentile**. Sir, with congressional direction we went out and contracted with the National Research Council to take a look at the liquids situation and they recently came back with a report. What they told us is that we need to do some work in oil and gas R&D. They also told us that we should be looking at direct liquefaction and western oil shales.

When this budget was prepared, the 1991 budget, we had not received this report yet. I can tell you that we will be looking very closely at this report. Basically, though again they talked about the oil and gas R&D, they talked about stressing direct liquefaction and the western oil shales.

Chairman **Byrd**. Are there environmental concerns with respect to the production of liquid transportation fuels from alternative sources, and does the council report include the cost of addressing any such concerns?

Mr. **Gentile**. Yes, sir; there are concerns and yes it does include that. We have made great strides in this country when it comes to these alternative fuels. In 10 years we have looked at the price go from $70 a barrel down to $35 a barrel. And we think that there is more work to be done. But yes, there are some concerns and we will be looking at that and including that in our studies.

Chairman **Byrd**. Why is the development of these alternatives to petroleum-based fuels important?

Mr. **Gentile**. Well, there's no doubt that imports are increasing drastically, EIA is projecting that by the year 2000 we're going to be reliant on imported oil to the tune of about 66 percent. We are right now looking, I think, at about 53 percent. It has great concerns for us not only in terms of energy security, but also in terms of balance of payments. We have to be thinking about our future. It's important for us to get the cost of these liquids down to where they compete. We think they can compete at about the $30 or less level in 1988 dollars. They become an option at that point. Right now we don't have too many options when it comes to liquid transportation fuels.

Chairman **Byrd**. Of the transportation fuels, what percent is presently accounted for by petroleum?

Mr. **Gentile**. Virtually everything.

Chairman **Byrd**. Not quite everything.

Mr. **Gentile**. Ninety-six percent of it is.

Chairman **Byrd**. Ninety-six?

Mr. **Gentile**. Well, I think so. I don't have a better guess.

PETROLEUM PRICES

Chairman **Byrd**. How do you see petroleum prices increasing over the next 10 or 20 years when the supply will be diminishing?

Mr. **Gentile**. The EIA has done several different scenarios on price. I don't think we are talking about just economics. So, it is kind of difficult for us to talk in terms of supply and demand. Rather we have some political factors at play here. With the price of oil where it is right now, we certainly are not going to see much more exploration and development in the United States. There are certain advantages to those who are exporting oil to the United States to keep the price low to preclude further expansion in the U.S. industry. So, there are some artificial factors at play here that aren't strictly a result of supply and demand.

Chairman **Byrd**. How much can the U.S. industry stand?

Mr. **Gentile**. Well, right now we're looking at a reserve base of about 27 billion barrels. When you look at enhanced oil recovery there is some additional reserve there, but enhanced recovery costs more dollars. We are not going to see enhanced recovery at the $18 level. We also think that there are some things that can be done in terms of precluding those reserves from being excluded from our options. That's hopefully where our R&D program is focusing. But we think there are some options there that can increase our reserves substantially by not abandoning fields, but at $18 quite honestly, Mr. Chairman, we are not going to be able to afford to enhance our recoveries.

Chairman **Byrd**. Are the council's assumptions about petroleum price increases over the next 20 years consistent with the estimate of the Department's Energy Information Administration?

Mr. **Gentile**. Yes, sir; I think they use EIA scenarios.

Chairman **Byrd**. And what is the assumption as to the increase in petroleum prices over the next 10 to 20 years?

Mr. **Gentile**. It's about $25 in the 1995 timeframe, but after that it gets very uncertain. But that's what it is based on.

Chairman **Byrd**. The price now is——

Mr. **Gentile**. The price right now—the last time we bought oil for the SPR I think we paid $17.89 per barrel for 500,000 barrels. That was delivered in U.S.-flag carriers.

Chairman **Byrd**. You are talking about something like a 50-percent increase from $17 to $25?

Mr. **Gentile**. Yes.

DEVELOPMENT OF SUBSTITUTE FUELS

Chairman **Byrd**. Is the council correct in its assessment of the timeframe and the costs needed to develop these substitute fuels?

Mr. GENTILE. Well, we're looking at that right now, Mr. Chairman. Our general impression of the report is that it is very well done. We think that they have isolated some areas that we also feel are areas that we should emphasize. As we move forward to the preparation of the 1992 budget, we are certainly going to be looking at their recommendations. But, yes, we do concur that, for example, we need to get that price down below the $30 level in order for it to be competitive. And with adequate funding we are going to try to follow that report as best we can.

Chairman BYRD. Do you think the technology will be ready sooner than 10 years or 20 years from now?

Mr. GENTILE. Well, we brought that price down from $70 to $35 in 10 years. Now, there is no doubt that that was the easiest increment to deal with. Now, we have a very tight increment—that last $5 to $8 is going to be more difficult. I would think that yes, we can make some major strides there. Oil shale is a little farther out. Oil shale is going to take a little bit more effort and we don't see that being something that's going to be available in the next few years. We are probably looking at 15 years before that becomes commercial. But on the other side, we are looking at maybe 5, 8, 9 years or something like that for liquefaction.

Chairman BYRD. So, what has the technology brought it down to?

Mr. GENTILE. Right now, $35.

Chairman BYRD. $35? And in 10 or 20 years—over the next 20 years we expect the petroleum price to go up to $25, $26, or $27?

Mr. GENTILE. In the next 5 years we expect it to go to $25. It is anyone's guess what happens after that. But if we can get these fuels to compete in 1988 dollars at the $30 level, I think they would be quite competitive.

Chairman BYRD. So, the council has concluded then that it is technically and economically practical to push the development of petroleum substitutes from coal, heavy oil, and tar sands; is that correct?

Mr. GENTILE. Yes, sir.

Chairman BYRD. We are talking about a need for substitute fuels which is driven by necessity, not just convenience; is that correct?

Mr. GENTILE. Yes; we anticipate that it is driven by necessity, yes, sir.

Chairman BYRD. Because domestic petroleum is limited—the production and the potential production are declining rapidly, isn't that correct?

Mr. GENTILE. Yes, sir.

TIMETABLE FOR SUBSTITUTE FUELS

Chairman BYRD. And if these options are to be commercially available within 10 years, how soon must the technologies be proven reliable and efficient? Won't there have to be some additional time for the phase-in of the commercial deployment?

Mr. GENTILE. Well, we are looking right now at a $35 product that we're trying to get down to $30. We think the technology is there, it's a matter of making the technology more efficient and lowering the price. My staff was telling me that they were looking at about a 5- to 7-year window.

COAL LIQUEFACTION

Chairman **Byrd**. Does the Department have a vigorous R&D effort on coal liquefaction?

Mr. **Gentile**. The effort has probably been more vigorous in the past. In 1991 it is not as vigorous. We will be looking at that again in 1992 as a result of this NRC study.

Chairman **Byrd**. What does that mean?

Mr. **Gentile**. Well, sir, in 1990 we had appropriations of $17.7 million for direct liquefaction. In 1991 we requested $4.5 million. Since the time of that request we've had the study and it's our intent most definitely to include this study in our 1992 budget development. We are going through that process right now. We think that with this study we will be hopefully placing a greater emphasis again on direct liquefaction.

Chairman **Byrd**. Congress appropriated $32.4 million in fiscal year 1989 for coal liquefaction, $34.5 million in fiscal year 1990, and how much is being requested in fiscal year 1991?

Mr. **Gentile**. The 1991 request is $10.6 million for coal liquefaction total.

Chairman **Byrd**. How much was requested at the OMB level?

Mr. **Gentile**. $38 million.

Chairman **Byrd**. Requested $38 million at the OMB level?

Mr. **Gentile**. That was the request of the—the OMB request level was $7 million, I am sorry.

Chairman **Byrd**. What was the Assistant Secretary's request?

Mr. **Gentile**. That was $38 million.

Chairman **Byrd**. And that was reduced to $7 million at the OMB level?

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. And in the budget request there is how much?

Mr. **Gentile**. In the budget request for this year there is $10.6 million.

Chairman **Byrd**. Now, if that additional $28 million could be provided, could it be efficiently and effectively used?

Mr. **Gentile**. I am sure it could, Mr. Chairman.

Chairman **Byrd**. In other words at your level you anticipated a more vigorous coal liquefaction research effort?

Mr. **Gentile**. Yes, sir; I think that when we went into this 1991 cycle that this report wasn't available. I would hope that as we go into the 1992 cycle with the strength of the report that we will be able to request more funds in 1992.

Chairman **Byrd**. But if the strength of the report is able to sustain that kind of request, why not put it in this bill?

Mr. **Gentile**. I think, sir, when the President made his request he was trading among various priorities, but that was with the Presidential request.

Chairman **Byrd**. But you could use this additional amount now based on the report?

Mr. **Gentile**. It could be used, yes, sir.

Chairman **Byrd**. Could you give us something from the report that would address this point?

Mr. **Gentile**. In terms of what we're planning to do or what we would like to do in 1992?

Chairman **Byrd**. Yes.

Mr. **Gentile**. We would be happy to supply that for the record.

Chairman **Byrd**. And what the potential is.

Mr. **Gentile**. Yes, sir.

[The information follows:]

POTENTIAL FOR AN EXPANDED PROGRAM IN COAL LIQUEFACTION

The National Research Council (NRC) recently completed a comprehensive study to outline a broad research and development program aimed at producing liquid transportation fuels from plentiful domestic resources. The coal liquefaction component of the recommended program would have two primary objectives over the next 5 years:

1. To develop technology for the production of marketable liquid fuels from coal at a cost competitive with crude oil at $30 per barrel by the mid to late 1990s.

2. To provide an engineering and operational data base in these technologies sufficient to allow industry to proceed with economically attractive commercial projects in that time frame.

As a result of enhanced Congressional appropriations and directives in FY 1989 and FY 1990, activities are in place directed toward these objectives. Because of the need for budget restraint, the FY 1991 budget request for coal liquefaction is not sufficient to continue these activities. The NRC recommended major research and development funding for direct coal liquefaction leading to pilot plant operation. Summarized below are the main elements of an enhanced program in direct liquefaction.

Wilsonville

Proof-of-concept testing for staged liquefaction process development is conducted at this facility. The FY 1991 request provides no funds for Wilsonville operations. The current operating contract expires in August 1990, and the facility will be shut down at that time. Funds for shutdown and contract close-out have already been obligated into the current contract so that no additional funds will be required. Funds required in FY 1991 to continue proof-of-concept testing of advanced staged liquefaction concepts at Wilsonville are estimated at $9,000,000.

Advanced Liquefaction Process Development

These are advanced liquefaction process concept activities at the bench-scale along with supporting process research. Bench-scale contracts are to be selected and awarded this fiscal year (multiple awards expected). Exploratory research at PETC and Sandia is ongoing with additional new competitive procurements in preconversion processing and improved bottoms processing options initiated this year. An estimated $4,000,000 in additional FY 1991 funds will be required to cover mortgages for these FY 1990 procurements and maintain scheduled level of effort research and achieve the described research and development program objectives within the specified 5-year time frame.

PETC Generic Bench-Scale Unit

This unit will provide U.S. industry with a bench-scale capability to evaluate process improvement concepts for advanced liquefaction processing on a cost-shared basis. Design will be completed and construction initiated with FY 1991 and prior-year appropriations. Construction is scheduled for completion in May 1992. Funds required in FY 1991 to continue scheduled construction are $2,300,000.

Direct Liquefaction Baseline Design

This activity is to develop a new direct liquefaction baseline design and economic study incorporating the advances made over the past 10 years in equipment design, process configuration, and process performance. This procurement was initiated in FY 1989 at Congressional request. An award to Bechtel has been announced, and a contract will be signed in the second quarter of FY 1990. By the end of this fiscal year, base case process flow diagrams will be completed and equipment design initiated. In FY 1991,

$1,000,000 will be required to complete the base case study. Systems analysis and process modeling would also be initiated in FY 1991, and these are scheduled for completion in FY 1992.

The NRC recommended modest funding for indirect liquefaction. Summarized below are the elements of an enhanced program in indirect liquefaction reflecting this priority:

LaPorte Proof-of-Concept Research Facility

Proof-of-concept testing of liquid phase reactor technology applied to conversion of coal-derived synthesis gas to methanol is carried out at this facility. FY 1990 funding will be used to continue equipment modifications to the facility in FY 1991. Funds are not available to complete modifications in FY 1991. In FY 1991, $4,000,000 would be required to complete construction (May 1992), complete shakedown and start-up operation, and initiate testing of improved methanol technology.

PETC Generic Bench-Scale Unit

This unit will provide industry with a bench-scale capability to evaluate on a cost-shared basis catalyst and process improvements for conversion of coal-derived synthesis gas to liquid fuels. Design will be complete and construction initiated in FY 1991 with prior-year appropriations. Construction is scheduled for completion in May 1992. Funds required in FY 1991 to continue scheduled construction are $2,000,000.

Catalyst, Laboratory, and Bench-Scale Research

This activity consists of small-scale catalyst and process research focused on conversion of coal-derived synthesis gas for the production of hydrocarbon fuels (primarily diesel fuel) and high-valued oxygenated octane enhancers. The work is conducted in-house (PETC), at national labs (Sandia), and with industry. The FY 1990 appropriation will fund research at PETC and Sandia, as well as existing contract research with industry and universities. Funds are also available to initiate new procurements focused on hydrocarbon and high-value oxygenate octane enhancer synthesis. The FY 1991 request will maintain reduced activity at PETC, Sandia, and selected industrial contract research. Additional FY 1991 funds of $3,800,000 would be required to maintain the current program and to fund contract mortgages resulting from the FY 1990 procurements.

Indirect Liquefaction Baseline Design

This activity is to develop a new indirect liquefaction baseline design and economic study incorporating advances made over the past 10 years in both gasification and synthesis gas conversion to liquid hydrocarbon fuels. This procurement will be initiated in FY 1990 as per Congressional request. Award is expected not earlier than the end of this fiscal year. Funds available this year could be used to start the activity in FY 1991. In FY 1991, $1,000,000 would be required to fund contract obligations. During FY 1991, base case process flow diagrams would be completed and equipment design initiated.

Systems Analysis and Research Guidance Studies

This work includes activities in both indirect and direct liquefaction and consists of technology assessments, systems analysis, and research guidance studies that serve to document the current status of these technologies in terms of economic and process improvements and to identify additional improvement potentials available from ongoing exploratory and bench-scale research and development. Much of this work utilizes process cost models that, in turn, are based on conceptual designs that are now nearly 10 years old. Results from the newer baseline design studies described above will be incorporated into these models to improve accuracy and credibility of results. In FY 1990, activities include assessment of recent Wilsonville results, completion of a status and current cost assessment of indirect technology to produce diesel fuel, and a preliminary assessment of improvement potentials available from co-siting direct and indirect technology facilities. Funds available in FY 1991 will be sufficient to update the status of direct liquefaction technology as demonstrated at Wilsonville and to complete an indirect liquefaction research guidance study for the production of diesel fuel. Additional funding of $300,000 would be required to incorporate the new baseline design results into the direct liquefaction model, to update direct liquefaction research guidance work with the improved design data, and to refine the preliminary co-siting study.

Advanced Research

This activity consists of approximately 40 fundamental and exploratory research projects conducted at PETC, national laboratories (ORNL, PNL, Sandia), and in academic, industrial, and not-for-profit organizations. The research is focused on four topics related to coal liquefaction: novel concepts, fundamental studies, biological approaches, and novel catalytic systems. Multiple contracts are expected to be awarded in this fiscal year. The FY 1991 request will maintain reduced research efforts at PETC, ORNL, PNL, and Sandia and continuation of private sector projects initiated in 1990. Additional FY 1991 funds of $4,700,000 would be required to maintain the current program and provide new competitive procurements.

LIQUEFACTION BUDGET

Chairman BYRD. Congress appropriated $32 million in 1989, $34 million in 1990 and you were requesting $38 million for fiscal year 1991. So, you were staying ahead of the curve on inflation, but they cut you by one-third, almost one-fourth—no, they cut three-fourths out almost. They cut you back from $38 million to $7 million and then $3 million has been restored. So, dropping from your request of $38 million back to $10 million and dropping from the fiscal year 1990 appropriations of $34.5 million down to $10 million. Right? That's a pretty precipitous drop; isn't it?

Mr. GENTILE. Yes, sir.

Chairman BYRD. Do you think that you can move forward in an aggressive research program with a drop of that kind?

Mr. GENTILE. As you know, Mr. Chairman, I wasn't there when this budget was prepared. I would assume that when the Assistant Secretary originally requested $38 million, it was because it was a project or a program that was in place that it was felt at that time would be a successful program. When we were forced in making the decisions—the President was forced in making the budget decisions he had to make and we were likewise having to make some decisions, we decided to downscale. We did not cancel any projects. What we were trying to do was to downscale to maintain the projects as best we could at that $10 million level. So, I think that there was probably a program in place there.

Chairman BYRD. You say a program was in place that was expected to be a successful one at the time the $38 million was requested. Now, what happens to that first trial successful program?

Mr. GENTILE. It's put on hold. We would not have operated the Wilsonville project. We would have just kept some small projects going and basically put it on hold.

Chairman BYRD. So, if it's restored what will you do?

Mr. GENTILE. If it's restored, sir, as I said, we go back to our program that was in place in terms of developing a program according to the recommendations of the National Academy of Sciences and their study and put the program we requested——

Chairman **Byrd**. What is the potential you see for the successful program that has been temporarily dropped?

Mr. **Gentile**. Well, the goal here is to bring the price of the liquids down below $30. It would mean that we would be trying to get a more efficient product, getting more through-put, lowering the price through efficiency and through some technology. So, we are looking at both.

Chairman **Byrd**. And what are the downsides to delaying such a program?

Mr. **Gentile**. Well, sir, the downside would be that it limits the options that the country would have in terms of transportation fuels. It's like an insurance policy in that with alternate fuels competing at that $30 level, it's a buffer against rising petroleum import prices. And that's the whole purpose of the program, to buffer against that. I think it's a security issue, sir.

Chairman **Byrd**. Well, awhile ago we were talking about necessity not being the mother of invention, but being the driving force behind developing these alternative fuels. The necessity will not have diminished; will it?

Mr. **Gentile**. No, sir.

Chairman **Byrd**. Now, we're staring something that is a certainty in the face, or rather it is staring us in the face. And at some point that necessity is going to be coming down like a train on a track; isn't it?

Mr. **Gentile**. I think it certainly is a certainty in terms of what our need is going to be for transportation fuels. I think the uncertainty is at what price we will be able to purchase those transportation fuels either domestically or internationally. And this program, I think, was directed as an energy security buffer against price hikes.

Chairman **Byrd**. What are the chances of success in this program if you continue to go forward with it?

Mr. **Gentile**. Again, we think that we have made major strides in the last 10 years, and we think again that we have a high chance of success in the 5- to 7-year timeframe.

Chairman **Byrd**. If the program stays on the track?

Mr. **Gentile**. Yes, sir.

Chairman **Byrd**. Do you think you will be able to get down to that $30 per barrel cost?

Mr. **Gentile**. It certainly is our goal.

OIL SHALE

Chairman **Byrd**. Senator Stevens spoke about the oil shale program. Would you like to speak to the potential for petroleum substitutes from oil shale?

Mr. **Gentile**. Well, I certainly think that again it's an area where we've made some great strides. It certainly is an area of incredible potential for this country, especially the western oil shales. We have vast amounts of oil shale land, especially Federal lands. So, there is great potential here. The question is getting the products at a price that make them players in our basket of options. And the other question is making sure that that can be done in an environmentally sound way so as not to jeopardize our groundwater, so as not to jeopardize our air. Again, great strides have been made and I think there is much more work to be done. But that is a little farther out. That program is probably a 15-year program, a 15- to 20-year timeframe.

Chairman BYRD. So, the option from coal seems to be nearer and the prospects seem to be brighter, even warmer using coal?

Mr. GENTILE. Yes.

Chairman BYRD. You would feel that the prospects are good on coal?

Mr. GENTILE. I think the prospects are good for both in different timeframes. For coal in the nearer term and for oil shales in the longer term. And there is no doubt that given the great abundance that we have on oil shales, that they will play or can play effectively in the future.

Chairman BYRD. What activities recommended in the National Research Council report will you not be able to conduct within your oil shale budget request of $662,000?

Mr. GENTILE. With the amounts of dollars requested we would not be able to do very much with the recommendations of the National Academy study. They propose several things, including a large pilot plant effort that we would not be able to undertake, nor would we be able to continue, given our current request.

IMPACT OF BUDGET REQUEST ON LIQUEFACTION PROGRAM

Chairman BYRD. May I ask the same question with respect to coal? What activities would you not be able to conduct?

Mr. GENTILE. The work that we are talking about is Wilsonville/LaPorte project and some of the benchscale work at PETC. What we were intending to do with the request was to keep as much of the program going as we could without shutting down the program. Again, we would have hoped to have included in our 1992 budget more consideration for this program, given the report that the National Research Council did.

Chairman BYRD. If you were forced to cut back from the $34.5 million to $10 million in developing a coal option, what does this mean in terms of—I'll use the word "shutdown" costs or at least "phasedown" costs and the start-up costs again later?

Mr. GENTILE. Well, whenever you shut down a project like Wilsonville, of course you are going to have greater start-up costs when you start them back up. What our intent again was to do exactly that. Basically we would have put on hold both Wilsonville and LaPorte during this time period.

Chairman BYRD. How much might it cost to complete the liquefaction research recommended by the National Research Council?

Mr. GENTILE. We haven't done that analysis yet. We have had that report about 6 or 8 weeks. We haven't done a detailed look at that report. We are doing it, but I am told that we could probably be operating at about the same level as we have in the past for the next approximately 5 years. We are taking a look at that now and responding to that report and trying to lay out a plan according to the report.

Chairman BYRD. Is it reasonable to believe that 1 billion barrels of coal liquids could be produced per year?

Mr. **Gentile**. We're juggling with that figure of 1 billion, Mr. Chairman.

You know, we think that in 5 to 7 years the technology is going to be there. Whether the next step in terms of commercialization, whether that investment will be made to take us to 1 billion, that's a sizable jump. I don't know that we have even looked at that.

Gary Voelker is telling me that one plant, one typical plant, would produce about 18 million barrels a year.

CLOSING REMARKS

Chairman **Byrd**. Mr. Gentile, thank you for your testimony today. If we could have the written responses within 3 weeks for the record inserts, that would be appreciated. I want to thank you and your associates for coming here today, Mr. Chun and Mr. Bechtel.

SUBCOMMITTEE RECESS

I thank you very much. The subcommittee will stand in recess until 10 a.m., Friday, May 18, when we will hear testimony from the Office of Surface Mining.

Mr. **Gentile**. Thank you, Mr. Chairman.

[Whereupon, at 3:48 p.m., Monday, May 14, the subcommittee was recessed, to reconvene at 10 a.m., Friday, May 18.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

FRIDAY, MAY 18, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:02 a.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd and Reid.

DEPARTMENT OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT [OSMRE]

STATEMENT OF HARRY M. SNYDER, DIRECTOR

ACCOMPANIED BY:

- **W. HORD TIPTON III, DEPUTY DIRECTOR, OPERATIONS AND TECHNICAL SERVICES**
- **ROBERT F. FAGIN, DEPUTY DIRECTOR, ADMINISTRATION AND FINANCE**
- **KRISTI A. HEISEL, ACTING CHIEF, DIVISION OF BUDGET, PLANNING, AND MANAGEMENT ANALYSIS**
- **BRENT WAHLQUIST, ASSISTANT DIRECTOR, PROGRAM POLICY**
- **ANTHONY L. ITTEILAG, DIRECTOR, OFFICE OF BUDGET, DEPARTMENT OF THE INTERIOR**

BUDGET REQUEST

Chairman BYRD. The subcommittee will come to order. Today we will consider the fiscal year 1991 budget request for the Office of Surface Mining Reclamation and Enforcement [OSMRE]. Testifying in support of the request will be the Director, Mr. Harry M. Snyder. We have your written statement. It will be made a part of the record. Since this is your first appearance before the subcommittee, your biography will also be included in the record. And you may introduce your associates now. Then you may summarize the statement, if you wish, and then we'll move into the questions.

INTRODUCTION OF ASSOCIATES

Mr. SNYDER. Yes, sir; Mr. Chairman, the two gentlemen here with me at the table, who I may have to direct some detailed questions to, are Deputy Director Hord Tipton, and Deputy Director

Robert Fagin. At the end of the table is Mr. Tony Itteilag from the Department of the Interior. And behind me is Kristi Heisel, who is our acting budget officer for the agency.

Chairman BYRD. Very well. So, you may proceed in any way you wish now.

SUMMARY STATEMENT

Mr. SNYDER. Thank you, sir.

It's a pleasure, Mr. Chairman, to be here to present our fiscal year 1991 budget request. As you have noted, I have already presented a copy of the prepared testimony for the record, and have just a brief statement to make now.

Chairman BYRD. All right.

OSM BUDGET REQUEST

Mr. SNYDER. I believe our budget request is realistic in that it underscores our commitment to the environment and to sound coal mine reclamation policies. Mr. Chairman, I am well aware of your keen and sincere interest in the success of the Surface Mining Act. Your record in the Senate over the past three decades attests to your own commitment to improve both our natural environment and the lives of the many thousands of people who depend on coal for their survival.

As you know, improving the environment and reclaiming the land for future generations is very costly, but it must be done. I believe that the money that we are requesting would enable us to effectively implement the act in a way that would benefit not only the people of the coal States, but of the Nation. With this funding, we will promote good, solid reclamation, sound enforcement and increasingly more scientific practices.

I realize that the Congress and the administration continue to disagree over some of the funding and allocation issues in the abandoned mine lands program. We are working diligently to develop an allocation formula that will be fair to all the States. I hope to have some solutions to put before the Congress that will bring an end to our differences on this and related AML issues.

I appreciate the opportunity, Mr. Chairman, to appear before you today, and as you know, this is my first year as Director of the Office of Surface Mining and thus my first year dealing with the Federal budget request.

I would be happy to take any questions now, Mr. Chairman, that you may have.

Mr. Chairman, I failed to introduce one other gentleman that I will refer to at the hearing, Dr. Brent Wahlquist here behind me.

[The statement follows:]

STATEMENT OF HARRY M. SNYDER

Mr. Chairman and Distinguished Members of the Committee:

It is a pleasure to appear before you today to discuss the Fiscal Year 1991 budget request for the Office of Surface Mining Reclamation and Enforcement. Before I get into the budget, I'd like to touch briefly on a few program issues that I think deserve some attention.

First, I'm pleased to inform you that OSM has reached agreement with the environmental organization, Save Our Cumberland Mountains, over the operation of the Applicant/Violator System (AVS). The agreement, which ends an eight-year dispute, sets out numerous tasks and commitments for OSM in exchange for a motion to drop legal action. Among our tasks are the refinement of the database for greater accuracy in identifying those responsible for uncorrected violations; the interface with databases maintained by other agencies -- State and Federal; the review of permits already in force to determine if they were appropriately issued; and the notification of corporate mining officials that they are subject to individual civil penalties if they do not take the necessary steps to correct past violations.

Resolving the AVS matter has been one of my major initiatives since I became Director last July. We are serious about getting down to business and bringing to a close some of the long-standing issues that have plagued OSM over the years. It is an agreement that meets our need to enforce the Surface Mining Act consistently and fairly.

The agreement also requires OSM to report regularly to the Congress and the public on actions taken to carry out the agreement. You have my assurance that you will be kept informed of developments in the implementation of this agreement.

Another issue of importance is our effort to define what constitutes valid existing rights (VER) to mine coal in areas protected by the Surface Mining Act. So that we may finally resolve this issue -- one which has plagued OSM since the Agency's inception -- we are carefully examining the political, policy, and legal aspects of VER before proposing an Agency regulation.

As part of this process, last month we co-sponsored, with the American Bar Association and the Mineral Law Center of the University of Kentucky, a national symposium on VER. The University of Kentucky is planning to publish the symposium proceedings in a special issue of the Journal of Mineral Law and Policy. The symposium gave us valuable insight that will help in the development of a final policy on VER - one that is reasonable, fair, and can work.

A third issue which I consider of considerable importance is State program oversight. It is my intention to continue OSM's efforts to perform quality evaluation of primacy programs. The budget, as proposed, will enable the completion of a number of efforts that are underway:

1) realignment of OSM's resources to better ensure that Field Offices have the capability to implement a more effective oversight program;

2) evaluation of prototype oversight programs to determine those techniques that will improve oversight;

3) adjustment of prototypes where necessary to ensure OSM's capability to track the trends within a State and to ensure the credibility of oversight; and

4) review of OSM's oversight policy guidance and regulations to ensure successful primacy programs.

In addition, I have recommended to the Department, and I will discuss with appropriate Congressional staff, my conclusion that Field Office Directors ought to report directly to Headquarters. Once we have the appropriate approvals, we anticipate this change will improve overall consistency in operational issues.

These efforts will substantially improve our oversight efforts and should go a long way in ensuring that State programs are being implemented appropriately.

I would also like to bring to your attention that the OSM financial management staff has completed all phases of the reconciliation of the Abandoned Mine Land (AML) Fund. This project involved a reconciliation of AML grant expenditures, reconciliation of State/Federal share of AML allocations, and reconciliation of AML receipts. As a result of this project, OSM records and accounts have been corrected and updated, and operations have been improved to provide a sound and efficient accounting system for the future. In light of the degree of criticism that OSM has received in the past in the area of fiscal management, I am particularly pleased that this task has been successfully completed.

One of the most important coal mine reclamation issues that the Congress has already begun to consider is the proposed reauthorization of the AML fee collection provisions of the Surface Mining Act. I believe that the continuing need for the AML program necessitates reauthorization. It is my plan to have an Administration recommendation for the Congress later this spring.

As you know, Mr. Chairman, we have been looking at the organizational structure of OSM to determine if significant improvements could result from some changes. I realize that OSM has endured a number of reorganizations and realignments since it was established, and that there is considerable sentiment to avoid further restructuring. In this respect, you can be assured that I am only interested in changes that would significantly improve OSM's ability to meet its mission. I am not interested in reorganization for the sake of reorganization.

An internal OSM task force, composed of representatives of key organizational elements, reviewed the current organization and presented alternatives to improve OSM's operations. The task force focused on issues such as management layers, degree of decentralization, Field Office alignment, responsiveness, and accountability. We have looked closely at specific goals that include decreasing overhead costs, clarifying lines of authority, increasing responsiveness, improving decision-making, and maintaining my commitment to the Field Offices' oversight responsibilities.

I have briefed senior officials in the Department on a proposed reorganization. Provided we get the necessary approvals, the new organization would be implemented October 1. Please be assured that I intend to consult with the appropriate committees of the Congress before implementation of the new organization plan.

Mr. Chairman, to this point I have presented some of the current issues that are being addressed at OSM. Now I would like to discuss the specifics of the Fiscal Year 1991 budget.

Our budget request reflects our continuing commitment to protect the nation and its resources from the adverse effects of surface coal mining. We have requested $260.7 million for Fiscal Year 1991. This represents a decrease of $34.8 million from last year's appropriations, with the largest share of the decrease attributable to a reduction in reclamation grants.

The Fiscal Year 1991 request for the Regulation and Technology appropriation is $110.8 million, which represents an increase of $8.1 million from 1990. We are requesting $47.9 million, an increase of $6 million from last year, for State Regulatory Grants. The increase will provide the States with additional funds to continue to administer their regulatory programs. Although in prior years the States have indicated a need for and capability to match increased funding, State program grants have not been substantially increased since 1987. The requested increase will allow the States to continue improvements as protectors of the environment through activities such as reviewing mine permit applications, inspecting current surface mining operations, and maintaining an enforcement program aimed at correcting SMCRA violations.

We propose that Regulatory Program Operations be maintained at $22.4 million, the same level as the base. The request will maintain OSM's overall inspection and oversight programs at their current levels.

Pursuant to a Memorandum of Understanding between the Department of the Interior and the Commonwealth of Kentucky which established a four-year program of financial and technical assistance to Kentucky, the 1991 budget request includes $1.1 million for the fourth and final year of the program which is scheduled to end in mid-FY 1991. This year's request is $2.7 million less than last year; the decrease reflects planned reductions in contractual costs.

The Fiscal Year 1991 budget request for Technical Services, Training and Research is $13.2 million, with no change to the base level. The requested amount will allow for a continued program of technical training, technical assistance and research aimed at solving regulatory and reclamation problems. Of special interest to me and the Administration is the President's initiative of no net loss of wetlands. To that end, we have committed approximately $130,000 in base funding for the study and conservation of wetlands.

The Fiscal Year 1991 budget request for Assessments and Collections is $12.1 million and includes an increase of $2.9 million and four FTEs for the Applicant/Violator System (AVS). The increase will implement our agreement with Save Our Cumberland Mountains as we continue to improve system accuracy and data quality. We will refine the system to allow interfacing of Federal databases and ensure compliance with existing regulations. Of the $2.9 million increase, $1.175 million is targeted for State program implementation.

The General Administration funding request is shared between two appropriations, and then further divided into three subactivities: Executive Direction, Administrative Support, and General Services. Total funding for the three areas is $19.6 million, an increase of $.6 million from the base. OSM is requesting an increase of $97,000 ($65,000 in the Regulation and Technology appropriation, and $32,000 in the Abandoned Mine Land appropriation) for continued development of the Coal Data Management Information System (CDMIS). CDMIS is a computer system under development to consolidate surface coal mining and reclamation data and other pertinent information presently maintained in several mainframe and microcomputers systems.

OSM is requesting a total of $.5 million to support initiatives undertaken by the Secretary of the Interior as part of the Department's stewardship program.

Education. OSM is requesting an increase of $200,000 to support initiatives to educate the American public on issues related to surface coal mining. This request is in the Executive Direction subactivity of General Administration and will be split between the two appropriations. ($120,000 in Regulation and Technology, $80,000 in Abandoned Mine Land Reclamation Fund.)

Women and Minorities. The OSM budget includes a request for $250,000 to enhance training and advancement opportunities for women and minorities. This request is in the Administrative Support subactivity of General Administration and will be split between the two appropriations. ($150,000 in Regulation and Technology, $100,000 in Abandoned Mine Land Reclamation Fund.)

Take Pride In America. OSM requests $71,000 for participation in the Department of the Interior Take Pride in America campaign. The campaign, aimed at promoting the conservation of America's natural resources, encourages volunteerism and public education. The request takes place in Regulation and Technology in the General Services subactivity of General Administration.

War on Drugs. The 1991 request includes a base increase of $12,000 ($7,000 in Regulation and Technology, $5,000 in Abandoned Mine Land Reclamation Fund) to foster a drug free workplace.

The request for the Abandoned Mine Land Reclamation Fund appropriation is $149.9 million, which is $42.9 million less than the FY 1990 appropriation level. The request includes $117 million for State reclamation grants, a decrease of $33 million from last year's grant level. The reduction is proposed due to the large accumulation of funds available to the States for reclamation projects. At the current rate of obligation, it would take the States approximately 2 1/2 years to obligate $439 million, the total amount of funds available to them at the start of Fiscal Year 1990.

Fiscal Year 1991 funding for the Fee Compliance program will remain at the 1991 base level of $6.0 million. This level will allow OSM to continue its ongoing audit and collections program aimed at ensuring coal operators' timely payment of the AML fees.

The 1991 request for Reclamation Program Operations is $17.8 million, with a decrease of $.5 million which is due to reduced needs for non-emergency project funding. The request of $1 million for high priority projects should be sufficient due to the decline in the number of problem areas in our high priority inventory.

As in previous years, the budget reflects a proposal to phase out the Rural Abandoned Mine Program (RAMP) administered by the Soil Conservation Service of the Department of Agriculture. In accordance with the Administration's preference to rely on State reclamation grants as the primary vehicle for achieving reclamation, the request for RAMP funds is limited to $2.1 million, the amount needed to complete existing projects in order to phase out RAMP. The total reduction for RAMP is $9.9 million. This should not be construed as a lack of support for the goals of the Rural Abandoned Mine Program. It is more cost effective to rely on the States for reclamation than to maintain two separate delivery systems.

A decrease of $.5 million is requested for the Small Operator Assistance Program (SOAP). The requested SOAP level is $1.5 million which is in line with actual SOAP obligations over the last two fiscal years.

Finally, I want to assure you that I am committed to ensuring that OSM fiscal matters are accomplished in a sound manner, consistent with prescribed internal control standards. In compliance with the Office of Management and Budget and the Department of Treasury review requirements, we have conducted Alternative Internal Control Reviews in the area of Cash Management and Debt Collection. In addition, as required by the Federal Manager's Financial Integrity Act, an Accounting System Compliance Review was performed to determine compliance to accounting principles and standards as prescribed by the United States General Accounting Office and the Office of Management and Budget. Corrective actions have been designed to enhance our systems. In the areas of debt collection and cash management activities, we are currently providing training to managers on vulnerability assessments and internal control review procedures.

Mr. Chairman, I appreciate the opportunity to appear before you today to discuss the Office of Surface Mining's Fiscal Year 1991 budget. I believe that this budget provides an appropriate funding level to accomplish the goals set forth in the Surface Mining Act. This concludes my prepared testimony. I would be pleased to answer any questions at this time.

BIOGRAPHY OF HARRY M. SNYDER

Harry M. Snyder was nominated to be the Director of the U.S. Department of the Interior's Office of Surface Mining by President Bush in July 1989. The nomination was confirmed by the U.S. Senate the same month. Mr. Snyder was sworn in at OSM's Washington Headquarters by Secretary of the Interior Manuel Lujan on August 2, 1989 -- the day before the 12th anniversary of the agency's creation. While taking the oath of office, Mr. Snyder placed his hand on a Bible held by his two daughters, Paige, 21, and Blake, 18, of Lexington, Kentucky.

At the time of his nomination, Mr. Snyder had served for three years in Lexington as Vice President for State Relations at CSX Corporation, which was formed by a merger of the Chessie and Seaboard rail lines.

Mr. Snyder also brings a professional background in both law and education to his OSM position. He was Executive Director of the Kentucky State Council on Higher Education from 1976 to 1986, and also was its Director of Finance and Legal Counsel. In addition, Mr. Snyder served on the finance staff of the University of Kentucky, and was Legal Counsel for Georgetown College in Kentucky, where he taught constitutional and commercial law.

Mr. Snyder, 48, is a native of Corbin, Kentucky. He is a graduate of Georgetown College with a B.S. degree in Economics and Business Administration. He earned his law degree from the University of Kentucky College of Law.

Mr. Snyder maintains his ties to his native state and to education by continuing as a director of the Kentucky Authority for Educational Television and the Kentucky Higher Education Assistance Authority.

BIOGRAPHY OF W. HORD TIPTON, III

W. Hord Tipton, III, is the Deputy Director for Operations and Technical Services for the Interior Department's Office of Surface Mining Reclamation and Enforcement (OSM). In that capacity, he manages OSM's regulatory and technical operations and coordinates the activities of the agency's field offices and operations centers.

Before his current assignment as Deputy Director, Tipton served for 7 years (1982-1989) as Director of OSM's Field Office in Lexington, Kentucky. Previously, he was Acting Regional Director and Deputy Regional Director for CSM in Knoxville, Tennessee. Tipton entered government service with OSM in 1979.

Tipton's career also includes 13 years as a chemical engineer with Union Carbide Corporation in Oak Ridge, Tennessee, managing R&D programs.

Tipton, 45, was born in Mt. Sterling, Kentucky. He is a graduate of Morehead University with a B.S. degree in Chemistry. He also holds an M.S. degree in Chemical Engineering and Engineering Administration from the University of Tennessee.

BIOGRAPHY OF KRISTI A. HEISEL

Ms. Heisel has been acting budget officer since July 1989. Prior to July, she was the Chief of the Branch of Planning in the Division of Budget, Planning and Management Analysis with responsibility for formulating OSM's budget. Ms. Heisel has worked in the Division of Budget, Planning and Management Analysis since August 1987. Ms. Heisel has experience in both budget execution and formulation.

Ms. Heisel has worked for the Office of Surface Mining since November 1979 in a variety of program areas. Ms. Heisel has worked as an economist in policy planning and environmental analysis. She has also worked in mine plan review and as a state regulatory program specialist. She has worked for the Federal government since October 1975.

Ms. Heisel has a Bachelor of Science (cum laude) degree in economics from the University of Utah (1973) and has completed the course work for a masters degree in economics.

BIOGRAPHY OF ROBERT F. FAGIN

Robert F. Fagin joined the Office of Surface Mining as the Deputy Director for Administration and Finance in May 1989. His previous experience in the Department of Interior was with the Bureau of Mines. There he held the positions of Associate Director for Finance and Management (November 1987 to May 1989); Assistant Director for Finance and Management (September 1985 to November 1987); and Assistant Director for Management Resources (January 1985 to September 1985).

Mr. Fagin was employed with the Department of Housing and Urban Development (HUD) from June 1970 to January 1985. His positions, in order of the most recent, were: Deputy Director, Office of Information Processing and Systems; Director, Office of Personnel; Director, Office of Organization and Management Information; and Special Assistant to the Assistant Secretary for Administration. He began his Federal career with HUD as a contract assistant and then as a management analyst.

Mr. Fagin earned a Master of Public Administration degree from American University in 1979 and a Bachelor of Arts degree in political science from the University of Virginia in 1970.

OSM OVERVIEW

Chairman **Byrd**. All right. We are very pleased to have your associates with us this morning.

As you have stated in your fiscal year 1991 budget presentation:

> The mission of the Office of Surface Mining Reclamation and Enforcement is to protect the public and the environment from the adverse effects of coal mining, while allowing access to the coal that is so important to the Nation's energy needs.

To accomplish its mission, OSM performs two major functions: regulating current surface coal mining operations to assure protection of the environment during mining and reclamation of the land after the coal is extracted; and repairing mined areas left without adequate reclamation prior to passage of the Surface Mining Control and Reclamation Act of 1977. The act provides the revenues needed for restoring abandoned coal mines through the collection of a tonnage-based reclamation fee assessed on each ton of coal produced.

The tasks of ensuring the necessary mining regulation and accomplishing the reclamation of abandoned mine lands are ultimately the responsibility of the 24 primacy States. It should be fundamental to the mission of OSM to cooperate with and provide support for the efforts of the primacy States in meeting their obligations under the Surface Mining Act. As stated in your budget presentation:

> OSM continues to enhance its partnership role with the States, promoting the recognition of States' accomplishments and stressing technical assistance to resolve remaining issues. At the same time, OSM strives to improve its oversight role through the early identification and resolution of problems.

With that background, I have some questions now regarding the issue of State primacy.

STATE PRIMACY

What is your understanding of the reasons for including provisions that allow for State primacy in the Surface Mining Act?

Mr. **Snyder**. Having not had much of a sense of history of the act, except through reading, Mr. Chairman, I am at somewhat of a disadvantage, but it strikes me that the primacy concept, which I am told was created in the Surface Mining Act, was an attempt to involve the States as full partners in enforcement of this important Federal legislation. And I think I should say for the record, Mr. Chairman, that I am committed to the primacy concept and to making it work.

Chairman **Byrd**. Each State has the unique capabilities and knowledge to regulate and enforce the coal mining industry within its boarders and because it is cost effective to the Federal Government.

Now, how would you describe the role of OSM in working with the primacy States?

Mr. **Snyder**. Well, as I indicated earlier, it is a partnership role and we are to oversee their enforcement activities and are to make sure that they are acting in accordance with our understanding of the provisions of the act.

Chairman **Byrd**. And support their efforts by providing grant and technical assistance and services.

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. Is State primacy a cost-effective means of ensuring regulation and accomplishing the reclamation of abandoned mine sites?

Mr. **Snyder**. Well, we believe it is.

Chairman **Byrd**. Your answer would indicate some lack of assurance.

Mr. **Snyder**. Well, Mr. Chairman, I haven't done a cost analysis on it, and I frankly don't know what alternatives—other than having direct Federal enforcement of the act, I don't know what alternatives there are available to the primacy concept. What knowledge I have about the issue would lead me to believe that it is cost effective.

Chairman **Byrd**. How would you describe your approach to OSM's responsibilities in the areas of oversight and annual reporting?

OSM OVERSIGHT

Mr. **Snyder**. Well, we have tried to assure, since I came in August, that we are performing our oversight role in the most effective manner possible with the resources we have. We want to try to help the States do the kind of job that the Congress and the administration expects them to do in enforcing this. And whatever that leads us to on a State-by-State basis, it is not the same, as you pointed out very clearly, Mr. Chairman. Each State is unique and has its own set of problems. It has its own capabilities and resources, and we want to help each State do the best job possible.

STATE PRIMACY

Chairman **Byrd**. What are the criteria for an OSM decision to remove a State's primacy?

Mr. **Snyder**. That is a very serious matter, and it has only been done once or twice in the history of the act since 1977. A State would have to be in virtual default of enforcement of the act and would have to have virtually no or very little program or resources or commitment to enforce the provisions of the law. It is a very serious matter to threaten primacy, let alone take it away.

Chairman **Byrd**. Well, what factors would be involved? Numbers of inspectors? Frequency of inspections?

Mr. **Snyder**. Well, those would be one of several of dozens of factors. An unwillingness or a refusal to commit adequate resources to the program as evidenced by personnel shortages. Inspection frequency would certainly be one of them, refusal to pass their own set of laws and regulations which are as effective as or no less stringent than the provisions of the surface mining law that was passed by the Congress.

Chairman **Byrd**. The number of violations cited and the adequacy of the violations cited and so on?

Mr. **Snyder**. Several. That would be another factor, yes.

Chairman **Byrd**. Are you considering removing primacy from any State at the present time?

Mr. **Snyder**. No, sir; as a matter of fact, Mr. Chairman, I would love to see primacy restored to the State of Tennessee which is the only State, producing any significant amount of coal, which does not have primacy.

Chairman **Byrd**. What needs to be done to bring about that restoration?

Mr. **Snyder**. Well, I am going to seek a meeting with Governor McWherter in Tennessee and explore those possibilities. The State has been reluctant, ever since they gave it back, to even discuss restoration of primacy there. They would have to commit the resources from their own State. They would have to agree to pass a set of regs or statutes in Tennessee that will be as effective as the Surface Mining Act, and they would have to make a commitment to do it.

Chairman **Byrd**. Are you working with them to try to bring about that commitment?

Mr. **Snyder**. I have not yet met with the Governor, but I intend to seek a meeting with him on this subject. Yes.

Chairman **Byrd**. And has OSM put together any contingency plans for taking over any State program?

Mr. **Snyder**. No, sir.

Chairman **Byrd**. Does your fiscal year 1991 budget request include funding to accomplish a Federal takeover of any State regulatory program?

Mr. **Snyder**. No, sir.

WEST VIRGINIA PROGRAM

Chairman **Byrd**. OSM approved the West Virginia regulatory program on May 15. Does this mean that OSM now considers the West Virginia program fully consistent with Federal standards?

Mr. **Snyder**. It is now an approved program by OSM. Assistant Secretary O'Neal signed off on the package on the 15th, which it moves them into the rank of other States that have fully approved programs. There are, Mr. Chairman, a few details that we were still working with the State on, just like other States. From time to time we have to ask them or require them to do additional things, to make modifications in the regulations, and so forth. We will continue to work with them, but they are now approved.

Chairman **Byrd**. Would you list what the State needs to accomplish in order to be fully consistent with the Federal standards?

Mr. **Snyder**. Yes, sir; I would be happy to submit that for the record, Mr. Chairman. It is several pages.

[The information follows:]

West Virginia's Regulatory Items Not Consistent With SMCRA or Federal Regulations After Publishing the Final Rule in the Federal Register on May 23, 1990

The attached portion of the final rule fully satisfied three of the conditions the Secretary placed on his approval of the original West Virginia program and partially satisfied two others. It also allowed removal of the Secretary's previous disapproval of two State rules and a portion of another. Portions of 11 State rules were not approved becuase they are inconsistent with SMCRA or the Federal rules. West Virginia also has 36 areas in its program to amend to be no less effective than the corresponding Federal requirements.

The current West Virginia legislative rule package will address a number of the required amendments and the State intends to initiate emergency rulemaking to address the other critical requirements. Remaining issues will be addressed in the 1991 legislative session.

[FROM THE FEDERAL REGISTER, MAY 23, 1990]

PART 948—WEST VIRGINIA

1. The authority citation for part 948 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

§ 948.11 [Removed]

2. Section 948.11 is removed.

3. In § 948.12, paragraphs (b) and (i) are removed and reserved and the section heading and paragraph (h) are revised to read as follows:

§ 948.12 State regulatory program and proposed program amendment provisions disapproved.

* * * * *

(b) [Reserved]

* * * * *

(h) Subsection 38–2–1.2(b) of West Virginia's surface mining reclamation regulations, as submitted on April 28, 1989, and revised on December 19, 1989, and February 7, 1990, is not approved to the extent that it provides:

> Such acknowledgement shall be deemed sufficient to make the application complete for any new permit requirements contained in these regulations and shall become a part of the permit.

(i) [Reserved]

4. In § 948.15, the first and second paragraphs of paragraph (i) are designated as paragraphs (i)(1) and (i)(2), respectively, and paragraphs (j) and (k) are added to read as follows:

§ 948.15 Approval of regulatory program amendments.

* * * * *

(j) The Code of Violations, as revised and submitted to OSM on June 30, 1986, is approved effective May 23, 1990.

(k) With the exceptions identified herein and in section 948.12, the following amendment to the West Virginia regulatory program as submitted to OSM on April 26, 1989, and modified and resubmitted on December 19, 1989, and February 7, 1990, is approved effective May 23, 1990. Replacement of all surface mining reclamation and coal refuse disposal regulations (including interpretive regulations) in chapter 20, Article 6, Series VII and VII–A (1985) of the State's Legislative Rules and the Permit Addendum with a new set of Legislative Rules at title 38, Series 2, entitled "West Virginia Surface Mining Reclamation Regulations." The following provisions of the new regulations are not being approved:

(1) The definition of "downslope" at subsection 38–2–2.43 to the extent that it references the lowest seam permitted to be mined rather than the lowest seam actually being mined.

(2) The definition of "embankment" at Subsection 38–2–2.44 to the extent that it requires that such a structure be "of five feet or greater in height as measured from the upstream toe";

(3) Subsection 38–2–3.7(a) to the extent that it provides: "Where alternative designs will achieve equivalent stability and meet all applicable requirements of the Act, these regulations and the terms and conditions of the permit, the Commissioner may approve such alternative design";

(4) Subsection 38–2–3.14 to the extent that it applies to the removal of abandoned coal mine refuse piles where the material being removed meets the definition of coal (ASTM standard D 388–77);

(5) Subsection 38–2–3.28(c) to the extent that it provides: "Provided that where such permits and approvals were granted prior to the effective date of these regulations, such revision shall be required only where compliance with these regulations are necessary to assure adequate protection of the environment or public health and safety";

(6) Subsection 38–2–5.4(a) to the extent that it could be interpreted to allow sediment control structures and bench control systems to be designed, constructed, located, maintained or used in accordance with criteria which replace rather than supplement the standards set forth in the approved program:

(7) Subsection 38–2–6.8(a) to the extent that it provides: "For the purposes of this section, drainage structures, haulroads and access roads are not considered part of the permit area unless blasting is necessary for construction";

(8) Subsection 38–2–12.4(d)(2) to the extent that it provides that use of Special Reclamation Fund monies to complete the reclamation plan for bond forfeiture sites is discretionary;

(9) Subsection 14.5(h) to the extent that it allows the waiver of water supply replacement rights for operations other than underground mines;

(10) Paragraphs (e)(8), (f)(5) and (g)(6) of Subsection 38–2–14.14 to the extent that they do not require the removal of subsurface organic matter from the critical foundation areas of excess spoil disposal structures prior to the placement of spoil on such areas; and

(11) Subsection 38–2–16.2(c)(2) to the

extent that it provides that an operator need repair or compensate individuals for material structural damage caused by subsidence only "to the extent required under applicable provisions of State law."

5. In section 948.16, the section heading is revised and paragraphs (d) through (mm) are added to read as follows:

§ 948.16 Required regulatory program amendments.

* * * * *

(d) By June 29, 1990, West Virginia shall submit proposed revisions to subsection 38–2–2.43 of its surface mining reclamation regulations to define "downslope" to mean the land surface between the projected outcrop of the lowest coal seam being mined (rather than to be mined) along each highwall and the valley floor.

(e) By June 29, 1990, West Virginia shall submit proposed revisions to subsection 38–2–2.44 of its surface mining reclamation regulations to remove the height threshold from the definition of "embankment."

(f) By June 29, 1990, West Virginia shall submit proposed revisions to subsection 38–2–2.66 of its surface mining reclamation regulations to define "impoundment" in a manner that includes water or slurry retention structures built at ground level without embankments.

(g) By June 29, 1990, West Virginia shall submit proposed revisions to subsection 38–2–2.94 of its surface mining reclamation regulations to define "prospecting" to include the gathering of environmental data to establish the conditions of an area prior to mining, or otherwise propose to amend its program to regulate such activities in a manner no less effective than the Federal rules at 30 CFR parts 772 and 815.

(h) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–3.1(k) of its surface mining reclamation regulations to require permit applicants to list all unabated, rather than all abated, air and water quality violation notices.

(i) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–3.7(a) of its surface mining reclamation regulations to remove the provision authorizing the approval of unspecified alternative excess spoil disposal structure designs.

(j) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–3.28(c) of its surface mining reclamation regulations to eliminate the provision limiting the Commissioner's authority to require permit revisions.

(k) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–5.4(a) of its surface mining reclamation regulations to clarify that sediment control structures and bench control systems must always be designed, constructed, located and maintained in accordance with approved program requirements and that the criteria set forth in the "Technical Handbook of Standards and Specifications for Mining Operations in West Virginia" or any other criteria is supplementary to, not in place of, those set forth in the approved program. Alternatively, West Virginia may delete the phase "or other approved criteria" and submit the Handbook to OSM for review as a program amendment.

(l) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–6.8(a) of its surface mining reclamation regulations to eliminate the provisions excluding certain portions of the permit area when determining the applicability of preblast survey notification requirements.

(m) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–5.4(b)(4) of its surface mining reclamation regulations to require that, before the Commissioner approves any proposed reduction in sediment storage capacity from the 0.125 acre-foot standard for sediment control structures or bench control systems, the applicant first demonstrate that discharges from the proposed structure will meet effluent limitations.

(n) By June 29, 1990, West Virginia shall submit proposed revisions to paragraphs (b)(4), (c) and (g)(3)(D) of subsection 38–2–5.4 of its surface mining reclamation regulations to clarify that bench control systems, completely incised sediment control structures and all other impoundments are subject to their requirements. In addition, the State shall, by that date, submit proposed revisions to subsection 38–2–5.4(d)(1) to require that all such impoundments be subject to annual inspection requirements.

(o) By June 29, 1990, West Virginia shall submit proposed revisions to paragraphs (e)(8), (f)(5) and (g)(6) of subsection 38–2–14.14 of its surface mining reclamation regulations to require the removal of all organic matter, not only that above ground level, from the critical foundation areas of excess spoil disposal structures prior to the placement of spoil on such areas.

(p) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–12.4(d)(2) of its surface mining reclamation regulations to clarify that the Commissioner is obligated to use Special Reclamation Fund monies to fully complete the approved reclamation plan on bond forfeiture sites.

(q) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–14.5(h) of its surface mining reclamation regulations to provide that only persons affected by underground mining activities may waive their water replacement rights.

(r) By June 29, 1990, West Virginia shall submit proposed revisions to paragraphs (e)(4) and (g)(8) of subsection 38–2–14.14 of its surface mining reclamation regulations to require that runoff from areas adjacent to and above both valley fills constructed with rock core chimney drains and durable rock fills be diverted into diversion channels designed and constructed to safely pass the peak runoff from a 100-year, 6-hour or equivalent precipitation event.

(s) By April 30, 1991, West Virginia shall submit proposed revisions to its surface mining reclamation regulations to require the submission of a plan to effectively control air pollution attendant to erosion.

(t) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–3.6 of its surface mining reclamation regulations or otherwise propose to amend its program to require that the permit application identify each topsoil and noncoal waste storage area, each explosive storage and handling facility, and the area of land to be affected within the proposed permit area according to the sequence of mining and reclamation.

(u) By April 30, 1991, West Virginia shall submit proposed revisions to:

(1) Subsection 38–2–3.25(a)(2) of its surface mining reclamation regulations to reference paragraphs (a), (b), (c), (d), (i), (j) and (k) of subsection 38–2–3.1, and

(2) Subsection 38–2–3.25(a)(4) of its surface mining reclamation regulations to reference paragraphs (c) and (d) of subsection 38–2–3.32, rather than paragraphs (b) and (c).

(v) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 3.26 of its surface mining reclamation regulations to require that applications for permit assignments be advertised pursuant to subsection 38–2–3.25(a)(3), contain the ownership and control information required by paragraphs 3.1 (a), (b), (c), (d), (i), (j) and (k) of subsection 38–2–3.1, and that subcontractors who will function as operators as that term is defined by the Federal regulations at 30 CFR 701.5 be subject to the eligibility requirements of paragraphs (c) and (d) of subsection 3.32.

(w) By April 30, 1991, West Virginia shall submit subsection 3.28 of its surface mining reclamation regulations or otherwise propose to amend its program to require that each application for a permit revision be reviewed by the Commissioner to determine whether a new or updated probable hydrologic consequences determination or cumulative hydrologic impact assessment is needed and to give the Commissioner the authority to require reasonable revision of a permit at any time.

(x) By April 30, 1991, West Virginia shall submit proposed revisions to subsection 38–2–3.30 of its surface mining reclamation regulations or otherwise propose to amend its program to require that the Commissioner make written findings no less effective than those set forth in 30 CFR 785.18(c)(9) before approving permits authorizing variances from contemporaneous reclamation requirements.

(y) By April 30, 1991, West Virginia shall submit proposed revisions to:

(1) Subsection 38–2–3.32(d)(12) of its surface mining reclamation regulations to reference subsection 14.16 instead of subsection 14.15(i); and

(2) Subsection 38–2–3.32(f) of its surface mining reclamation regulations to reference Subsections 3.32(c) and 3.1(n) instead of Subsections 3.32(b) and 3.1(p).

(z) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 3.33(h)(2) of its surface mining reclamation regulations to reference paragraph (c) of Subsection 3.1, not paragraph (p).

(aa) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38–2–5.2 of its surface mining reclamation regulations to require that, before the Commissioner approves any mining within 100 feet of an intermittent or perennial stream, he make a finding that such activities will not cause or contribute to the violation of applicable State or Federal water quality standards.

(bb) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38–2–5.4(c) and/or paragraphs (b) and (h) of Subsection 38–2–3.6 of its surface mining reclamation regulations to require that, prior to construction, the general and detailed design plans for sediment control structures and bench control systems be certified as being designed to meet regulatory program requirements and any design criteria established by the regulatory authority.

(cc) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38–2–6.5 of its surface mining reclamation regulations or otherwise propose to amend its program to establish, or require that the permit establish, maximum ground vibration limits for all structures, not just those defined in the State rule as protected structures.

(dd) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-9.3 of its surface mining reclamation regulations or otherwise propose to amend its program to establish productivity success standards for grazing land, pasture land and cropland; require use of the 90 percent statistical confidence interval with a one-sided test using a 0.10 alpha error in data analysis and in the design of sampling techniques; and require that revegetation success be judged on the basis of the vegetation's effectiveness for the postmining land use and in meeting the general revegetation and reclamation plan requirements of Subsections 9.1 and 9.2. Furthermore, by that date, West Virginia shall submit for OSM approval its selected productivity and revegetation sampling techniques to be used when evaluating the success of ground cover, stocking or production as required by 30 CFR 816.116 and 817.116.

(ee) By April 30, 1991, West Virginia shall submit documentation that the U.S. Soil Conservation Service (SCS) has been consulted with respect to the nature and extent of the prime farmland reconnaissance inspection required under Subsection 38-2-10.1 of the State's surface mining reclamation regulations. In addition, the State shall either delete paragraphs (a)(2) and (a)(3) of Subsection 38-2-10.2 or submit documentation that the SCS State Conservationist concurs with the negative determination criteria set forth in these paragraphs.

(ff) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 11.1(a) of its surface mining reclamation regulations to require that insurance coverage be maintained throughout the reclamation liability period.

(gg) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 13.2(d) of its surface mining reclamation regulations to require that applications for prospecting permits include a map showing the location of critical habitats of any endangered or threatened species.

(hh) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-14.8(a)(4) of its surface mining reclamation regulations to prohibit placement of woody materials in the backfilled area unless the Commissioner first determines that the proposed method for placing woody material within the backfill will not cause future stability problems.

(ii) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 14.12(a)(6)(B) of its surface mining reclamation regulations to specify that, with respect to variances from approximate original contour restoration requirements, the watershed will be deemed improved only if changes in seasonal flow volumes from the proposed permit area will not adversely affect surface water ecology or any existing or planned use of surface or ground waters.

(jj) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-14.14(e)(2) of its surface mining reclamation regulations to require that the entire fill, not just its foundation, be designed to attain a minimum long-term static safety factor of 1.5.

(kk) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-17.4(n) of its surface mining reclamation regulations to require that all coal produced by operations owned by persons who directly or indirectly control the applicant by reason of direction of the management be attributed to the applicant.

(ll) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-17.3(b)(4) of its surface mining reclamation regulations to require that applications for small operator assistance be accompanied by a map identifying the location and extent of known workings of underground mines.

(mm) By April 30, 1991, West Virginia shall submit proposed revisions to Subsection 38-2-22.4(h)(2) of its surface mining reclamation regulations to authorize the use of a single open-channel spillway only when it is of nonerodible construction and designed to carry sustained flows or is earth- or grass-lined and designed to carry short-term infrequent flows at nonerosive velocities where sustained flows are not expected.

[FR Doc. 90-11753 Filed 5-22-90; 8:45 am]

BILLING CODE 4310-05-M

WEST VIRGINIA PROGRAM

Chairman **BYRD**. Are there any Federal obstacles remaining to prevent West Virginia from implementing its regulatory program on June 1?

Mr. **SNYDER**. Federal obstacles?

Chairman **BYRD**. Yes.

Mr. **SNYDER**. Not that I know of, no, sir.

Chairman **BYRD**. How would you characterize the surface mining regulatory program in West Virginia?

Mr. **SNYDER**. Well, they have made a lot of improvements, and they are now positioned, Mr. Chairman, to add the additional staffing that we think they need to have. The legislature put the administration of Governor Caperton in a position to have more revenue and more financial resources which they can devote to the program by the passage of the additional—I guess they call it a severance tax or fee. And we have agreed to furnish a senior executive from OSM on an IPA down there to help with the transition of the program between the commissioners while they are looking for a commissioner. We have agreed to match additional resources as they appear.

ENFORCEMENT STAFF

Chairman **BYRD**. What effect does the predominance of deep mining, as opposed to surface mining, have on the number of inspectors required and the frequency of inspections required?

Mr. **SNYDER**. Mr. Chairman, since you have raised that in a previous session that we had, I took a look at the configuration in West Virginia, the so-called mix of mining, and while I think something in the neighborhood of 80 percent of the coal production in your State is from underground mining, the number of units are virtually the same. There are 1,060 surface mines today. There are 1,064 underground mines. They are about the same.

Chairman **BYRD**. Is this over the country?

Mr. **SNYDER**. No; it's in West Virginia.

Chairman **BYRD**. That's 1,060?

Mr. **SNYDER**. It's 1,060 surface; 1,064 underground, and 1,180 other inspectable units.

Chairman **BYRD**. What do you mean by that?

Mr. **SNYDER**. Well, haul roads, tipples, coal processing plants, coal refuse piles and things like that.

Chairman **BYRD**. Let me have a list of those.

Mr. **SNYDER**. I will be happy to do that for the record, yes, sir.

Chairman **BYRD**. In each case, the surface mining and the deep mining locations.

[The information follows:]

WEST VIRGINIA INSPECTABLE UNITS LIST

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
S-2039-86	92 COAL CORP.		BARBOUR		11.60	10	
S-2013-87	92 COAL CORP.	P. O. BOX 489, GRAFTON, WV	BARBOUR	CENTURY NO. 2 "C"	61.00	10	
S-2018-89	92 COAL CORP.	PO BOX 489 GRAFTON WV 26354	BARBOUR	INDIAN FORK NO 1	76.03	10	
S-4018-87	A & N TRUCKING CO.	PO BOX 25, RODERFIELD, WV	MCDOWELL	OZLEY BRANCH	11.60	10	46-0672
U-4002-88	A & N TRUCKING CO.	P.O. BOX 25, RODERFIELD, WV 24881	MCDOWELL	NO. 2 MINE	3.95	20	
U-4009-88	A & N TRUCKING CO.	BOX 25, RODERFIELD, WV 24881	MCDOWELL		5.75	20	
UO-599	A.B.C. COAL CO., INC.	BOX 76, BAISDEN, WV 25608	LOGAN	MINE NO. 4	6.00	20	
S-1004-89	A.C. MINING COMPANY	P.O. BOX 586, KINGWOOD, WV 26537	PRESTON	WOLF MINE	100.00	10	46-06401
166-78	A.M.Y. COAL CO.		NICHOLAS	BRECKENRIDGE	100.00	10	46-04726
U-78-85	A.T. COALS, INC.		RALEIGH		17.00	20	
UO-609	ACADEMY COAL (F & J COAL)	BOX 13, COAL MTN, WV	WYOMING	#2	2.60	20	
UO-610	ACADEMY COAL, INC.		WYOMING		3.00	20	
U-3043-89	ACKLEY HOUSTON CORP.	915 MAIN STREET RAINELLE WV 25962	FAYETTE	MINE NO 5	1.64	20	
U-3042-89	ACKLEY HOUSTON CORP.	915 MAIN STREET RAINELLE WV 25962	FAYETTE	MINE NO 4	5.24	20	
U-3024-86	ACKLEY-HOUSTON CORP.		FAYETTE	MINE NO. 3	3.67	20	46-0699
O-117-82	ACKLEY-HOUSTON CORP.		FAYETTE		10.00	20	
U-26-84	ACKLEY-HOUSTON CORP.		FAYETTE		7.48	20	
O-73-82	AFFINITY MINING CO.	PO BOX 960, SOPHIA, WV	RALEIGH		83.00	31	
O-135-83	AFFINITY MINING CO.	POBOX 948 SOPHIA WV 25921	RALEIGH		80.00	31	
U-152-82	AFFINITY MINING COMPANY	PO BOX 960, SOPHIA, WV	RALEIGH		7.57	20	
P-609	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON 25701	LOGAN	25 PREPARATION PLANT	46.35	31	46-02435
O-45-85	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO		26.00	33	46-02435
O-65-82	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO		59.50	38	
D-26-81	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO		4.43	20	
O-5032-86	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO	EXISTING HAULROAD NO. 1	15.00	32	
U-5058-86	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO	PROPOSED MINE NO. 2	10.00	20	
38-79	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON WV 25701	MINGO	NO 1 SURFACE	635.00	10	46-05971
97-80	AGIPCOAL USA, INC.	611 3RD AVE HUNTINGTON WV 25701	MINGO		390.00	10	
S-5001-88	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON 25701	MINGO	HOLDEN 25 MINE	236.60	10	
U-5002-88	AGIPCOAL USA, INC.	611 THIRD AVE HUNTINGTON 25701	MINGO	NO. 26 MINE	8.90	20	
U-5030-89	AGIPCOAL USA, INC.	HC-64 BOX 840 DEBOARD KY 41214	MINGO	BIG SOUTH DEEP MINE	8.46	20	
S-5027-89	AGIPCOAL USA, INC.	HC-64-BOX 840 DEBOARD, KY 41214	LOGAN	COW CREEK SURFACE MINE	348.12	10	
S-1010-87	ALAN BLOSSER	RT 4, BOX 268, MORGANTOWN, WV	MONONGALIA	HUNTER TRACT	12.00	10	46-06640
49-80	ALBERTA COAL COMPANY		NICHOLAS		52.00	10	
R-7-81	ALEXANDER BROTHERS		MCDOWELL		39.00	33	
O-36-84	ALEXANDER BROTHERS	BOX 94, MINERAL CITY, OH	MCDOWELL	BARTLEY PLANT	3.13	31	46-05643
S-1040-86	ALEXANDER BUILDING AND DEV		PRESTON	PISGAH MINE	50.00	10	46-05632
125-79	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT	JOB NO. 12A	242.30	10	46-02151
14-78	ALLEGHENY MINING		GRANT	BURGESS - ROHRBAUGH	71.00	10	46-02151
160-76	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT	JOB NO. 10	120.00	10	46-02151
175-72	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT	JOB NO. 3	97.00	10	46-02151
176-78	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT		168.00	10	46-02151
247-74	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT	JOB NO. 1	129.00	10	46-02151
88-74	ALLEGHENY MINING	P O BOX 232 MT STORM WV	GRANT	JOB NO. 4	180.00	10	46-02151
H-256	ALLEGHENY MINING	POBOX 232 MT STORM WV 26739	GRANT		11.80	32	
I-638	ALLEGHENY MINING	POBOX 232 MT STORM WV 26739	GRANT		24.90	34	
O-11-81	ALLEGHENY MINING	POBOX 232 MT STORM WV 26739	GRANT		10.00	32	
O-4-81	ALLEGHENY MINING	POBOX 232 MT STORM WV 26739	GRANT		21.90	33	
S-101-84	ALLEGHENY MINING	PO BOX 232, MT. STORM, WV	GRANT	ALLEGHENY	17.20	10	46-02151
S-11-83	ALLEGHENY MINING	POBOX 232 MT STORM WV 26739	GRANT	JOB NO. 2	220.20	10	46-02151
S-56-84	ALLEGHENY MINING	PO BOX 232, MT. STORM, WV	GRANT	ROTRUCK - COSNER	71.70	10	46-02151
S-8-82	ALLEGHENY MINING		MINERAL	JOB 10A	71.00	10	46-02151
I-506	ALLEGHENY MINING		MINERAL		22.00	38	
S-1038-87	ALLEGHENY MINING CORP.	P.O. BOX 232, MOUNT STORM, WV 26739	PRESTON	HARDESTY MINE	48.00	10	
S-2007-89	ALLEGHENY MINING CORP.	PO BOX 2332 MT STORM WV 26739	GRANT	REXRODE JOB	72.00	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA II
S-81-84	ALLEN TRUCKING CO.	GEN DEL, KIMBALL, WV	MCDOWELL		16.00	10	
S-1014-87	ALLIED MINING CO.	BOX 45, KINGWOOD, WV	PRESTON	ALLIED MINE	140.40	10	46-06930
EM-31	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV	MCDOWELL	E13-C MINE	4.00	20	46-02510
EM-35	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		5.00	20	
EM-37	ALPINE DEVELOPMENT CO.	BOX 727 IAEGER WV 24844	MCDOWELL		13.78	20	46-04656
EM-60	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		3.29	20	
EM-89	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		5.00	20	
0-144-83	ALPINE DEVELOPMENT CO.	BOX 727 IAEGER WV 24844	MCDOWELL		44.24	33	
0-140-83	ALPINE DEVELOPMENT CO.	BOX 727 IAEGER WV 24844	MCDOWELL	BLUE BOY PLANT	24.20	31	46-02227
UO-427	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		10.00	20	
UO-618	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		3.96	20	
EM-63	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV	MCDOWELL		2.00	20	
U-157-83	ALPINE DEVELOPMENT CO.	BOX 303, WELCH, WV 24801	MCDOWELL		7.07	20	
S-1018-88	AMANDA NICOLE FUELS, INC.	RT. 2, BOX 506, GRAFTON, WV 26354	PRESTON	GOFF TRACT MINE	28.17	10	46-07523
S-50-85	AMBREC CORPORATION		PRESTON		113.00	10	
U-1008-86	AMBREC CORPORATION		PRESTON	MINE NO. 1	19.30	20	
S-1086-86	AMBREC CORPORATION	PO BOX 586, KINGWOOD, WV 26537	PRESTON	SURFACE MINE NO. 2	150.00	10	
U-1049-87	AMBREC CORPORATION	P.O. BOX 586, KINGWOOD, WV	GRANT	[illegible]P MINE [illegible]. 2	13.00	20	
S-1037-88	AMBREC CORPORATION	P.O. BOX 586, KINGWOOD, WV 26537	PRESTON	ALLIED MINE	166.25	10	
R-2-82	AMERICAN BITUMINOUS POWER	33 ROCK HILL ROAD BALA CYNWYD PA	MARION		46.00	33	46-01430
U-128-83	AMERICAN BITUMINOUS POWER		MARION	#41 MINE	115.00	20	46-01427
0-5-83	AMERICAN BITUMINOUS POWER	33 ROCK HILL RD BALA CYNWYD PA 1900	MARION	FEDERAL #1	110.00	33	46-01429
0-21-83	AMERICAN BITUMINOUS POWER	33 ROCK HILL, BALA CYNWYD, PA 19004	MARION	JOANNE REFUSE	80.00	33	46-01430
R-1030-88	AMERICAN BITUMINOUS POWER	33 ROCK HILL RD BALA CYNWYD PA	MARION	NO 1 REFUSE AREA	196.00	33	
S-92-85	AMERICOAL		HARRISON		12.60	10	46-06799
S-1023-89	AMERIKOHL MINING INC	415 FAIRMONT RD, WESTOVER, WV 26505	PRESTON	MILLER SURFACE MINE	58.80	10	
S-1013-86	AMERIKOHL MINING, INC.	P.O. BOX 2187, WESTOVER, WV 26505	MONONGALIA	MINE #2	23.00	10	
S-1027-88	AMERIKOHL MINING, INC.	P.O. BOX 2187, WESTOVER, WV 26505	MONONGALIA	MYRES MINE NO 2	55.00	10	
S-1016-88	AMERIKOHL MINING, INC.	P.O. BOX 2187, WESTOVER, WV 26505	MONONGALIA	MINE NO. 1	231.00	10	
S-1048-87	AMERIKOHL MINING, INC.	P.O. BOX 2187, WESTOVER, WV 26505	HARRISON	PURDYS RUN #1 MINE	49.00	10	
S-2041-88	AMERIKOHL MINING, INC.	PO BOX 2187 WESTOVER WV 26505	BARBOUR	HOSTUTLER #1 MINE	46.00	10	
S-1041-88	AMERIKOHL MINING, INC.	P.O. BOX 2187, WESTOVER, WV 26505	PRESTON	KELLEY KNOB	46.00	10	
S-2019-89	AMERIKOHL MINING, INC.	415 FAIRMONT ROAD WESTOVER WV 26505	BARBOUR	MCVICKER SURFACE MINE	34.00	10	
S-2022-89	AMERIKOHL MINING, INC.	PO BOX 2187 WESTOVER WV 26505	BARBOUR	VOLFE #1 MINE	52.60		
S-1017-88	AMERIKOHL MINING, INC.	415 FAIRMONT RD, WESTOVER, WV 26505	MARION	ELSIE-LUCY NO. 1	72.00	10	
0-6026-87	AMHERST INDUSTRIES, INC.	PORT AMHERST, CHARLESTON, WV	KANAWHA	PORT AMHERST RIVER TIPPLE	15.80	34	
0-6025-87	AMHERST INUDSTRIES, INC.	PORT AMHERST, CHARLESTON, WV	KANAWHA	CHELYAN RIVER LONG DOCK	5.00	34	
EM-71	AMIGO SMOKELESS COAL CO.		RALEIGH	AMIGO NO. 3	3.00	20	46-04320
0-63-82	AMIGO SMOKELESS COAL CO.	POBOX 966 BECKLEY WV 25801	RALEIGH		6.00	33	
UO-623	AMIGO SMOKELESS COAL CO.	PO BOX 966, BECKLEY, WV	RALEIGH	#4	5.00	20	46-06400
I-725	AMIGO SMOKELESS COAL CO.	POBOX 966 BECKLEY WV 25801	WYOMING	WYCO LOADING POINT	7.00	34	46-02424
0-161-83	AMIGO SMOKELESS COAL CO.		WYOMING		170.00	33	
S-5003-86	ANCHOR MINING, INC.		LOGAN/MING	NO 1 SURFACE	152.50	10	
26-80	ANDERSON & ANDERSON CONST.	NEW HOPE ROAD PRINCETON WV	MCDOWELL		110.00	10	46-04609
U-3049-86	ANDERSON COAL COMPANY	300 LOCUST DR., SUMMERSVILLE, WV	NICHOLAS	MINE NO. 1	26.00	20	
U-154-82	ANGELA MINING CO.	RT 1, BOX 1450, KINGWOOD, WV	PRESTON		3.20	20	
UO-709	ANGUS MINING CO.	PO BOX 266 CORRETTA WV 24821	MCDOWELL		8.70	20	
0-34-82	ANKER ENERGY CORPORATION	RT. 12, BOX 245, MORGANTOWN, WV	MONONGALIA		22.00	34	
R-754	ANKER ENERGY CORPORATION	RT. 12, BOX 245, MORGANTOWN, WV	MONONGALIA		12.28	33	
0-1005-87	ANKER ENERGY CORPORATION	RT. 12, BOX 245, MORGANTOWN, WV	MONONGALIA	MAIDSVILLE COAL RAIL LOAD	3.78	34	
0-1005-89	ANKER ENERGY CORPORATION	RT. 12, BOX 245, MORGANTOWN, WV	MONONGALIA		32.00	33	
0-3061-86	ANSTED COAL CO.	PO BOX 66989, ST. LOUIS, MO	FAYETTE	FAYETTE COUNTY MINE	47.00	32	
S-3060-86	ANSTED COAL CO.	PO BOX 66989, ST. LOUIS, MO	FAYETTE	FAYETTE COUNTY MINE	45.00	10	
S-1029-88	ANTCO, INCORPORATED	RT. 1, BOX 134J, FAIRMONT, WV 26554	MARION	ANTCO SURFACE MINE	25.25	10	
U-56-84	APEX COAL CO.	BOX 73 WAR WV 24872	MCDOWELL	NO. 1 & 2	13.70	20	46-05354

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA 1
U-6012-89	APPALACHIAN MINING, INC	PO BOX 2189 ASHLAND KENTUCKY 41105	FAYETTE	ALLOY DEEP MINE #383	55.92	20	
S-6009-88	APPALACHIAN MINING, INC.	P.O. BOX 273, CHARLESTON, WV 25321	FAYETTE	ALLOW # 1	1034.30	10	
S-6027-88	APPALACHIAN MINING, INC.	P.O. BOX 2189, ASHLAND, KY 41105	KANAWHA	CAMPBELLS CREEK # 1	346.18	10	46-07647
0-6032-88	APPALACHIAN MINING, INC.	P.O. BOX 2189, ASHLAND, KY 41105	KANAWHA	CAMPBL CRK CROSS COUNTRY	72.96	32	46-07649
S-6034-88	APPALACHIAN MINING, INC.	PO BOX 2189 ASHLAND KY 41105	KANAWHA	CAMPBELLS CREEK MINE #S-8	353.98	10	46-07649
D-10012	APPALACHIAN POCAHONTAS CO.		MERCER		5.00	20	
D-10013	APPALACHIAN POCAHONTAS CO.		MERCER		5.00	20	
D-24-81	APPALANTIC COAL		LEWIS		5.52	20	
U0-626	APPALANTIC COAL		LEWIS	NO. 2A	6.27	20	46-06178
U-129-83	ARACOMA DEVELOPMENT, INC.	O BOX 187, NORTH MATEWAN, WV 25688	LOGAN		10.50	20	
NONE	ARCH COAL		HARRISON	TIPPLE	6.00	34	
R-1076-86	ARCH COAL CO., INC.		HARRISON	DOLA	51.00	33	
EM-73	ARCH OF WEST VIRGINIA INC	PO BOX 149, LUNDALE, WV 25631	LOGAN		5.97	20	
U-32-83	ARCH OF WEST VIRGINIA, INC	LUNDALE, WV 25631	LOGAN		10.80	20	
159-74	ARCH OF WEST VIRGINIA, INC		LOGAN	LUNDALE 3A	1228.00	10	46-03355
0-1-85	ARCH OF WEST VIRGINIA, INC	P.O. BOX 149, LUNDALE, WV	LOGAN		41.20	10	
0-146-83	ARCH OF WEST VIRGINIA, INC	GEN. DEL., LUNDALE, WV 25631	LOGAN		1.90	34	
0-149-83	ARCH OF WEST VIRGINIA, INC	GEN. DEL., LUNDALE, WV 25631	LOGAN		166.53	33	
0-163-83	ARCH OF WEST VIRGINIA, INC	GEN. DEL., LUNDALE, WV 25631	LOGAN		32.90	31	
0-47-84	ARCH OF WEST VIRGINIA, INC	P.O. BOX 149, LUNDALE, WV	LOGAN		75.00	33	
0-5-84	ARCH OF WEST VIRGINIA, INC	GEN DEL, LUNDALE, WV 25631	LOGAN		97.00	33	
U-10-84	ARCH OF WEST VIRGINIA, INC	GEN. DEL., LUNDALE, WV 25631	LOGAN		12.30	20	
U-5-83	ARCH OF WEST VIRGINIA, INC	LUNDALE, WV 25631	LOGAN		9.40	20	46-01370
U-65-83	ARCH OF WEST VIRGINIA, INC	GEN. DEL., LUNDALE, WV	LOGAN		15.90	20	
U-68-83	ARCH OF WEST VIRGINIA, INC	GEN. DEL. LUNDALE, WV	LOGAN	LUNDALE NUMBER 5	18.00	20	46-05703
S-68-85	ARCH OF WEST VIRGINIA, INC		LOGAN		129.90	10	46-03335
S-75-85	ARCH OF WEST VIRGINIA, INC		LOGAN	RUFFNER	740.80	10	46-06751
S-5035-86	ARCH OF WEST VIRGINIA, INC		LOGAN/WYOM	LUNDALE 3A/BUFFALO MT	234.50	10	46-03335
U0-243	ARCH OF WEST VIRGINIA, INC	LUNDALE, WV 25631	LOGAN	LUNDALE #4	32.60	20	46-03162
S-5079-86	ARCH OF WEST VIRGINIA, INC	PO BOX 149 LUNDALE, WV 25631	LOGAN	CALVIN BRANCH SURFACE MIN	546.20	10	
U0-60	ARCH OF WEST VIRGINIA, INC	LUNDALE, WV 25631	LOGAN		14.20	20	
0-94-82	ARCH OF WEST VIRGINIA, INC	LUNDALE, WV	LOGAN		4.50	20	
13-76	ARCH OF WEST VIRGINIA, INC		LOGAN		571.00	10	
U-5026-88	ARCH OF WEST VIRGINIA, INC	P.O. BOX 149, LUNDALE, WV 25631	LOGAN	CENTRAL RIDGE MINE	10.40	20	
46-76	ARMCO		BOONE		107.00	10	46-04469
H-360	ARMCO		RALEIGH		31.00	32	
U-3031-86	ARMCO INC.		WYOMING	MINE NUMBER 26	34.00	20	46-06177
U0-495	ARMCO INC.		RALEIGH	#22	6.00	20	46-05117
U0-325	ASHFORD PROPERTIES, INC.	P.O. BOX 4453, CHAPMANVILLE, WV	LOGAN		2.38	20	46-05949
NONE	ASHLAND MINING		MCDOWELL	ASHLAND TIPPLE	0.00	34	46-02517
S-3065-88	ATLAS COAL LEASING INC	PO BOX 370 STANAFORD WV 25927	RALEIGH	# 1 STRIP	39.00	10	
U-3022-89	ATLAS COAL LEASING INC.	PO BOX 370 STANAFORD WV 25927	RALEIGH	ATLAS NO 1 MINE	10.00	20	
S-3021-89	ATLAS COAL LEASING, INC.	PO BOX 370 STANAFORD WV 25927	WYOMING	NO 1 MINE	53.60	10	
NONE	AVANTI MINING CO.		UPSHUR		1.00	34	
S-109-85	B & B COAL		HARRISON		19.00	10	46-06286
S-117-82	B & B COAL CO.	RT 1 BOX 256 MT CLARE WV 26408	HARRISON	MT. CLARE JOB	19.00	10	46-06286
S-2038-86	B & B COAL CO.		UPSHUR	TALBOTT STRIP	30.00	10	46-06286
S-2008-87	B & B COAL CO., INC.	RT 1, BOX 256, MT. CLARE, WV	UPSHUR	TURKEY RUN	26.40	10	
S-5058-88	B & C BITUMINOUS MINING IN	RT 3, BOX 581, OLIVE HILL, KY 41164	MINGO	LAUREL FORK #1 SRFCE MINE	32.00	10	
S-5012-89	B & C BITUMINOUS MINING IN	RT 3 BOX 581, OLIVE HILL, KY 41164	MINGO	LAUREL FORK #2	302.62	20	
S-97-83	B & D COAL CO.	RT 2 BOX 506, GRAFTON, WV	TAYLOR		25.00	10	
S-1038-86	B & D COAL CO.		TAYLOR		58.00	10	46-06309
U-4019-88	B & S CONSTRUCTION, INC.	BOX 99, AVONDALE, WV 24811	MCDOWELL	MINE NO. 1	1.38	20	
H-90	B & S CONTRACTING, INC.	BOX 175 HANSFORD WV 25103	NICHOLAS		21.00	32	
S-3031-87	B & S CONTRACTING, INC.	364 CHURCH ST., SUMMERSVILLE, WV	RALEIGH		26.65	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA II
U-3054-87	B & S CONTRACTING, INC.	364 CHURCH ST., SUMMERSVILL,WV	NICHOLAS	B & S MINE NO. 1	10.00	20	
U-3055-87	B & S CONTRACTING, INC.	364 CHURCH ST., SUMMERSVILL,WV	NICHOLAS	B & S MINE NO. 2	10.00	20	
O-3086-87	B & S CONTRACTING, INC.	364 CHURCH ST., SUMMERSVILLE, WV	NICHOLAS	B&S REFUSE #1	24.00	33	
37-80	B. A. COAL CO.	HWY 41 BOX 1696 SUMMERSVILLE W	NICHOLAS	NO. 2 SURFACE	33.00	10	46-05864
S-17-81	B. A. COAL CO.	HWY 41 BOX 1696 SUMMERSVILLE W	NICHOLAS		22.00	10	46-05013
S-70-82	B. A. COAL CO.	HWY 41 BOX 1696 SUMMERSVILLE W	NICHOLAS	#2 SURFACE	24.00	10	46-05864
S-20-84	B. A. COAL CO.	HGWY 41, BOX 1696, SUMMERSV,WV	NICHOLAS		44.00	10	46-05864
S-49-85	B. A. COAL CO.		NICHOLAS		74.87	10	
S-100-85	B. A. COAL CO.		NICHOLAS		130.00	10	
S-1017-86	B. L. & S. COAL CO., INC.		MARION		36.00	10	46-07299
84-81	B.A.G. COAL CO.	100 CHAR DR, BECKLEY, WV	SUMMERS		90.00	10	
D-163	BADGER COAL CO.	145 SAGO RD BUCKHANNON WV 2620	BARBOUR	MINE #14	9.80	20	46-05294
EM-103	BADGER COAL CO.	145 SAGO RD, BUCKHANNON, WV	BARBOUR	14-A	30.50	20	46-04294
EM-110	BADGER COAL CO.	145 SAGO RD, BUCKHANNON, WV	BARBOUR	MINE #15	3.65	20	46-04294
EM-118	BADGEP COAL CO.	145 SAGO RD, BUCKHANNON, WV	BARBOUR		12.50	20	
O-102-83	BADGER COAL CO.	145 SAGO RD BUCKHANNON WV 2626	BARBOUR	YELLOW BOY REFUSE	10.00	31	
P-713	BADGER COAL CO.	145 SAGO RD BUCKHANNON WV 2620	BARBOUR	NO. 10 PREP PLANT	21.50	31	46-04294
R-649	BADGER COAL CO.	145 SAGO RD BUCKHANNON WV 2620	BARBOUR	JACKSON REFUSE	89.00	33	46-04294
D-184	BADGER COAL CO.	PO BOX 456, PHILLIPI, WV	UPSHUR		80.00	20	
O-39-83	BADGER COAL CO.	PO BOX 456, PHILLIPI, WV	UPSHUR	REED HOLLOW REFUSE	105.00	33	46-04819
R-413	BADGER COAL CO.		UPSHUR	#10 PREP PLANT	27.30	33	46-04294
U-28-83	BADGER COAL CO.	PO BOX 456, PHILLIPI, WV	UPSHUR		15.00	20	
U-86-84	BAILEY LEASING CORPORATION	BOX 309, PANTHER, WV 24872	MCDOWELL		2.79	20	
S-13-81	BAKER COAL CO.	PO BOX 114, PT. MARROR, PA	MONONGALIA	BAKER STRIP	31.00	10	46-06003
S-63-83	BAKER COAL CO.	POBOX 114 POINT MARION PA	MONONGALIA	BAKER STRIP	18.90	10	46-06003
D-75-82	BALDWIN MINING CO.	RT 3, BOX 101, PHILIPPI, WV	GILMER		9.47	20	
U-250	BANNER COAL & LAND CO.		BOONE		9.00	20	
117-79	BARBOUR COAL CO.	POBOX 1744 CLARKSBURG WV 26301	BARBOUR	BETHLEHEM - ETAL.	200.00	10	46-02326
105-77	BARBOUR COAL CO.	POBOX 1744 CLARKSBURG WV 26301	BARBOUR	QUEEN	100.00	10	46-02326
108-73	BARBOUR COAL CO.	POBOX 1744 CLARKSBURG WV 26301	BARBOUR	BETHLEHEM MINES	241.00	10	46-02326
83-81	BARBOUR COAL CO.	POBOX 1744 CLARKSBURG WV 26301	BARBOUR	JOB NO. 9	70.00	10	46-02326
UO-352	BARON COALS CO.		LOGAN -		2.50	20	
UO-694	BARRENSHE COAL	PO BOX 654, WAR, WV	MCDOWELL		3.79	20	
U-1-85	BARRETT FUEL CORPORATION	41 EAGLES RD, BECKLEY, WV 25801	BOONE		17.00	20	
U-44-83	BARRETT FUEL CORPORATION	41 EAGLES ROAD, BECKLEY, WV 25801	RALEIGH		12.58	20	
U-82-84	BARRETT FUEL CORPORATION	41 EAGLES RD, BECKLEY, WV 25801	BOONE		6.00	20	
D-35-82	BASS ENERGY, INC.	442 ELM ST., MORGANTOWN, WV 26505	UPSHUR		5.15	20	
O-4-84	BASS ENERGY, INC.	440 ELM ST., MORGANTOWN, WV 26505	UPSHUR	REFUSE #2	80.31	32	
U-60-83	BASS ENERGY, INC.	442 ELM ST., MORGANTOWN, WV 26505	UPSHUR		24.70	20	
S-3030-88	BATOFF MOUNTAIN COAL CO	BOX 20 STAUNTON VIRGINIA 24401	RALEIGH	LANARK #1 AUGER	30.00	10	
S-69-85	BATTLE RIDGE CO		KANAWHA		280.00	10	46-06696
S-66-83	BATTLE RIDGE CO.	PO BOX 5147, CHARLESTON, WV	KANAWHA	SERVCO	80.00	10	46-06696
S-6021-86	BATTLE RIDGE CO.		BOONE/KAN	BATTLE RIDGE CO.	130.00	10	46-06696
S-92-84	BATTLE RIDGE CO.		KANAWHA		97.50	10	
S-6009-87	BATTLE RIDGE COMPANIES	1300 CHARLESTON NTL,CHAS., WV	KANAWHA		59.80	10	
S-6074-87	BATTLE RIDGE COMPANIES	1300 CHRLSTN NTL PLAZA, CHARLS	KANAWHA	BATTLE RIDGE SENTZ LICK M	303.00	10	
S-6017-89	BATTLE RIDGE COMPANIES	1300 CHAS NAT'L PL CHARLESTON WV	BOONE	ORGAS NO 1 MINE	56.67	10	
134-80	BATTLE RIDGE COMPANIES	1300 CHAS. NATL PLAZA CHARLESTON WV	BOONE	BLACK PEARL STRIP	80.00	10	46-04530
U-25-85	BAY STAR COAL		MCDOWELL		4.20	20	
U-4007-86	BAY STAR COAL CO., INC.		MCDOWELL	MINE NO. 2	14.87	20	
U-4006-89	BAY STAR COAL CO., INC.	BOX 1084, BLUEFIELD, WV 24605	MCDOWELL		5.01	20	
U-28-84	BAY STAR COAL COMPANY INC		MCDOWELL	YUKON NO. 2	10.94	20	46-06807
U-4006-87	BAY STAR COAL COMPANY INC.	BOX 1084 BLUEFIELD VA 24605	MCDOWELL		37.12	20	
EM-133	BECKLEY LICK RUN CO.	PO BOX 272, MT. HOPE, WV	RALEIGH		12.23	20	
P-731	BECKLEY LICK RUN CO.	PO BOX 272, MT. HOPE, WV	RALEIGH		36.20	31	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
R-737	BECKLEY LICK RUN CO.	PO BOX 272, MT. HOPE, WV	RALEIGH		18.00	33	
102-77	BEDCOR, INCORPORATED	SUITE 1300, 1 VALLEY SQR, CHARLESTN	BOONE	BEDCORE STRIP	332.23	10	46-0565
S-13-83	BEDCOR, INCORPORATED	SUITE 1300, 1 VALLEY SQR. CHARLSTON	BOONE	BEDCORE STRIP	93.50	10	46-0564
S-27-81	BEDCOR, INCORPORATED	SUITE 1300 ONE VALLEY SQUARE,CHAS.	KANAWHA		56.40	10	
S-35-83	BEDCOR, INCORPORATED		BOONE	JOES CREEK	47.00	20	46-05645
U-85-83	BEECH GROVE COAL CO.	BOX 158, IAEGER, WV	MCDOWELL	NO 2	4.00	20	46-0666
UO-439	BEECH GROVE COAL CO.	PO BOX 158, IAEGER, WV	MCDOWELL	MINE NO. 1	5.00	20	46-0601
47-78	BELINGTON MINING		BARBOUR	BELINGTON	171.00	10	46-0232
U-6020-86	BELL CREEK COAL CO.	BOX 21A SWISS WV 26690	CLAY	MINE NO. 1	1.70	20	
I-748	BELL MINING CO.	POBOX 667 CLARKSBURG WV 26301	HARRISON		5.00	34	
S-10-83	BELL MINING CO.	PO BOX 667, CLARKSBURG, WV	HARRISON	BELL NO. 2	28.00	10	46-0268
S-51-81	BELL MINING CO.	POBOX 667 CLARKSBURG WV 26301	HARRISON	BELL NO. 2	50.00	10	46-0268
S-95-83	BELL MINING CO.	PO BOX 667, CLARKSBURG, WV	HARRISON	BELL NO. 2	43.30	10	46-0268
S-25-83	BELL MINING CO.	PO BOX 667, CLARKSBURG, WV	MARION		14.00	10	46-02686
S-5-85	BELL MINING CO.		MARION	BELL NO. 2	54.00	10	46-0268
S-81-82	BELL MINING CO.	POBOX 667 CLARKSBURG WV 26301	MARION	BELL NO. 2	7.00	10	46-0268
S-1037-87	BELL MINING CO., INC.	PO BOX 667, CLARKSBURG, WV	HARRISON	HALPENNY	26.88	10	
S-1003-88	BELL MINING CO., INC.	P.O. BOX 667, CLARKSBURG, WV 26301	HARRISON	MARTIN TRACT	15.18	10	
U-1032-88	BELL MINING CO., INC.	P.O. BOX 667, CLARKSBURG, WV 26302	HARRISON	WILLIAMS #2	5.39	20	
S-1030-87	BELL MINING COMPANY, INC.	PO BOX 667, CLARKSBURG, WV	MARION		33.40	10	46-02686
63-78	BELMONT COAL COMPANY	ONE CARBON CENTER, CHESAPEAKE, WV	KANAWHA	NO. 27	267.94	10	46-01328
D-44-82	BELMONT COAL COMPANY	3905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA	MINE NO. 78	5.40	20	
D-50-82	BELMONT COAL COMPANY	13905 MACCORKLE AVE., CHESAPEAKE,WV	KANAWHA	MINE NO. 77	15.95	20	46-0618
H-145	BELMONT COAL COMPANY	ONE CARBON CTR., CHEASAPEAKE, WV	KANAWHA		65.00	32	
S-501	BELMONT COAL COMPANY	13905 MCCKLE AVE CHESAPEAK WV	KANAWHA		4.00	35	46-01326
U-45-83	BELMONT COAL COMPANY	13905 MACCORKLE AVE. CHESAPEAKE, WV	KANAWHA		70.00	20	
U-67-83	BELMONT COAL COMPANY	13905 MACCORKLE AVE, CHESAPEAKE,WV	KANAWHA		14.04	20	
UO-669	BELMONT COAL COMPANY	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA		6.92	20	
UO-706	BELMONT COAL COMPANY	13905 MACCORKLE AV, CHESAPE,WV	KANAWHA	MINE NO. 46	9.19	20	
D-6011-86	BELMONT COAL COMPANY	13905 MACCORKLE AVE SE CHESAPEAKE	KAN/FAY	CARBON HAULROAD	34.24	32	
UO-265	BELMONT FUEL		NICHOLAS		7.00	20	
D-19-82	BELVA COAL CO.	BOX 487, MAN, WV	LOGAN	BC	11.00	20	46-0650
41-80	BELVA COAL CO.	POBOX 487 MAN WV 25635	LOGAN	10A SURFACE MINE	417.00	10	
D-107-82	BELVA COAL CO.	PO BOX 487, MAN, WV	LOGAN	58 MINE	4.48	20	
D-123-82	BELVA COAL CO.	BOX 487, MAN, WV	LOGAN		9.95	20	
EM-123	BELVA COAL CO.		LOGAN		10.26	20	
H-436	BELVA COAL CO.	POBOX 487 MAN WV 25635	LOGAN	MAIN	40.00	32	
H-535	BELVA COAL CO.	POBOX 487 MAN WV 25635	LOGAN		5.88	32	
D-64-82	BELVA COAL CO.	POBOX 487 MAN WV 25635	LOGAN		4.00	38	
R-591	BELVA COAL CO.		LOGAN		55.00	33	
S-94-82	BELVA COAL CO.	POBOX 487 MAN WV 25635	LOGAN		142.60	10	
EM-122	BELVA COAL CO.		LOGAN	B-A-A.D.	8.00	20	46-4641
D-41-82	BELVA COAL COMPANY	BOX 487, MAN, WV 25635	MINGO		4.69	32	
P-654	BELVA COAL COMPANY	BOX 487, MAN, WV 25635	LOGAN		60.00	31	
U-5067-88	BELVA COAL COMPANY	P.O. BOX 487, MAN, WV 25635	LOGAN	B-B MINE	7.00	20	
U-5043-89	BELVA COAL COMPANY	P. O. BOX 487, MAN, WV 25635	LOGAN	NO 5-F MINE	7.23	20	
I-709	BEMIS COAL CO.		WEBSTER		15.00	33	46-06352
R-709	BEMIS COAL COMPANY	PO BOX 666 WEBSTER SPRINGS WV 26288	WEBSTER		15.00	33	
D-8-83	BEMIS HOLDING CO.	POBOX 666 WEBSTER SPRINGS WV	WEBSTER		10.00	34	
U-35-83	BEMIS HOLDING CO.	270 SYLVAN AVE, NJ 07632-2513	WEBSTER	LINDA	18.00	20	46-06352
R-8-81	BENAFUELS		MERCER	REFUSE PROCESSING	16.00	33	46-06727
R-1-84	BENAFUELS	PO BOX 180, MACOMAS, WV	MERCER		22.00	33	
D-59-83	BENAFUELS, INC.	1750 KOPPERS BLDG., PITTS, PA	WYOMING		136.40	38	
D-78-82	BENAFUELS, INC.	1750 KOPPERS BLD PITT PA 15219	WYOMING		12.90	31	
U-21-83	BENAFUELS, INC.	1750 KOPPERS BLDG., PITTS., PA	WYOMING	KEYSTONE NO. 2	14.70	20	46-01535

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UO-405	BENAFUELS, INC.	1750 KOPPERS BLDG., PITTS., PA	WYOMING	KEYSTONE 3-E	8.00	20	46-01535
P-587	BENHAM GROUP LTD		BOONE	RAW COAL LOADOUT	0.50	34	
U-121-83	BENHAM GROUP LTD	PO BOX 2056, SAN RAFEAL, CA	BOONE		9.00	20	
I-573	BENHAM GROUP LTD	PO BOX 2056, SAN RAFAEL, CA	KANAWHA	RIDGEVIEW TIPPLE	0.90	34	
U-6039-86	BENHAM GROUP, LTD., ET.AL.	PO BOX 2056, SAN RAFAEL, CA	BOONE	SEQUOIA NO. 3 MINE	2.30	20	
U-81-85	BENHAM GROUP, LTD.ET.AL.		BOONE		2.90	20	
U-74-85	BENTLEY COAL COMPANY	P.O. BOX 1939, ELKINS, WV 26241	BARBOUR	AUDRA NO. 1	7.40	20	46-05991
S-2041-86	BENTLEY COAL COMPANY	PO BOX 1939 ELKINS,WV 26241	RANDOLPH	LONG RUN SURFACE MINE	178.63	10	
S-2020-86	BENTLEY COAL COMPANY	P.O. BOX 1939, ELKINS, WV 26241	RANDOLPH	FLATBUSH #1	241.37	10	
U-2009-88	BENTLEY COAL COMPANY	BOX 1939, ELKINS, WV 26241	RANDOLPH		66.64	20	46-07529
U-2025-88	BENTLEY COAL COMPANY	P.O. BOX 1939, ELKINS, WV 26241	RANDOLPH	LONG RUN NO. 1	12.00	20	46-07609
O-2023-88	BENTLEY COAL COMPANY	BOX 1939, ELKINS, WV 26241	RANDOLPH	NORTON RAILROAD LOADOUT	24.20	34	
U-2029-88	BENTLEY COAL COMPANY	P.O. BOX 1939, ELKINS, WV 26241	RANDOLPH	FLATBUSH NO. 1 DEEP MINE	10.00	20	
75-81	BENTLEY, C. W.	PO BOX 2178, ELKINS, WV	RANDOLPH		71.00	10	46-06367
UO-120	BERACHAH MINING, INC.	ST RT, BOX 207, MEADOR, WV 25076	LOGAN		8.80	20	
54-78	BERWIND LAND COMPANY	1050 1 VALLEY SQUARE CHAS. WV 25301	FAYETTE	SURFACE NO. 2	115.94	10	
O-46-84	BEST LOADING CO.		MONONGALIA		11.00	34	
O-5060-86	BETHENERGY MINES, INC.	PO BOX 4108 CHAR., WV 25304	BOONE	BROWN'S BRANCH DISPOSAL	114.94	38	
O-43-83	BETHLEHEM MINES	7012 MACCORKLE A,SE,CHAS., WV	BOONE	VAN PREP PLANT	145.50	31	46-04789
U-34-83	BETHLEHEM MINES	BOX 4108, CHARLESTON, WV 25304	BOONE	VAN WEST MINE NO. 131	61.85	20	46-04789
03951	BETHLEHEM MINES		KANAWHA	GOB HOLLOW	0.00	33	46-0053-
O-2-85	BETHLEHEM MINES	7012 MACCORKLE AVE,SE,CHAS.,WV	NICHOLAS		91.00	10	
O-6-85	BETHLEHEM MINES	7012 MACCORKLE AVE,SE,CHAS.,WV	NICHOLAS	COAL STORAGE AREA	8.00	35-	46-04130
S-53-84	BETHLEHEM MINES	7012 MACCORKLE AVE SE, CHAS,WV	NICHOLAS		140.00	10	
U-7-85	BETHLEHEM MINES	7012 MACCORKLE AVE.,SE,CHAS,WV	NICHOLAS	#01	74.00	20	
UO-691	BETHLEHEM MINES	POBOX 4108 CHARLESTON WV 25304	NICHOLAS		12.00	20	
O-27-85	BETHLEHEM MINES		NICHOLAS		38.80	34	
O-44-85	BETHLEHEM MINES		NICHOLAS		53.90	38	WV40191
O-26-84	BETHLEHEM MINES	7012 MACCORKLE AVE,SE, CHAS,WV	BARBOUR	NORTH HOLLOW REFUSE	94.20	31	
O-44-83	BETHLEHEM MINES	7012 MACCORKLE AVE,SE, CHAS,WV	BARBOUR	101 TIPPLE, REFUSE	60.00	33	
U-16-83	BETHLEHEM MINES		BARBOUR	101 WHITE PORTAL	8.04	20	
U-24-84	BETHLEHEM MINES	7012 MACCORKLE AVE,SE, CHAS,WV	BARBOUR	106-A MINE	10.50	20	
U-72-83	BETHLEHEM MINES	7012 MCCORKLE AVE SE CHAS,WV	BARBOUR	105 WEST	30.51	20	
U-74-83	BETHLEHEM MINES	7012 MCCORKLE AVE SE CHAS, WV	BARBOUR	102 TIPPLE - 105 EAS	20.00	20	
U-8-85	BETHLEHEM MINES		BARBOUR		46.64	20	
UO-371	BETHLEHEM MINES	7012 MCCORKLE AVE SE CHAS,WV	BARBOUR	STRADER MOUNTAIN PORTAL	6.92	20	
UO-401	BETHLEHEM MINES	7012MCCORKLE AVE SE CHAS,WV	BARBOUR		10.04	20	
O-27-82	BETHLEHEM MINES	7012 MACCORKLE AVE., CHAS., WV	UPSHUR		8.85	20	
O-78-82	BETHLEHEM MINES	7012 MACCORKLE AVE.,SE,CHAS,WV	UPSHUR		56.96	20	
U-117-83	BETHLEHEM MINES	7012 MACCORKLE AVE,SE, CHAS,WV	UPSHUR	MINE #108	41.70	20	
U-22-84	BETHLEHEM MINES	7012 MACCORKLE AVE,SE,CHAS.,WV	UPSHUR	POST MINE	14.81	20	
U-41-83	BETHLEHEM MINES	7012 MACCORKLE AVE., CHAS., WV	UPSHUR	108 NORTH	15.00	20	46-01427
UO-520	BETHLEHEM MINES	7012MCCORKLE AVE SE, CHAS,WV	BARBOUR	#105-A	12.84	20	46-06505
NONE	BETHLEHEM MINES		KANAWHA	GOB HOLLOW	0.00	33	46-0053-
DR-21	BETHLEHEM MINES CORP	P.O. BOX 4307 CHAPMANVILLE WV 25508	BOONE		65.00		
S-40-83	BETHLEHEM MINES CORP.		BOONE		162.50	10	
UO-316	BETTY COAL CO.	GEN. DEL., JOLO, WV	MCDOWELL		4.82	20	
UO-543	BETTY LOU COAL CO.		KANAWHA		15.90	20	
O-133-82	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING	GOLDEN BEAR NO. 1	22.00	20	46-06619
O-107-83	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING		54.55	33	
O-174-83	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING	LYNCO PREP PLANT	66.45	31	46-02829
UO-589	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING		8.50	20	
UO-605	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING	EAGLE NO. 5 PUNCH OUT	8.01	20	46-01973
S-83-83	BIG BEAR MINING CO.	PO BOX 407, LYNCO, WV	WYOMING		90.98	10	
U-4002-86	BIG BEAR MINING CO.		WYOMING	SIGNAL NO. 1 MINE	9.70	20	

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D-69-82	BIG BEAR MINING CO.	PO BOX 615, PINEVILLE, WV	WYOMING		3.70	20	
235-76	BIG BEAVER COAL CO.	PO DRAWER 12, BEAVER, WV	WEBSTER	COWEN	432.29	10	
238-76	BIG BEAVER COAL CO.	PO DRAWER 12, BEAVER, WV	WEBSTER	COWEN	490.00	10	
240-76	BIG BEAVER COAL CO.	PO DRAWER 12, BEAVER, WV	WEBSTER	COWEN	542.00	10	
35-76	BIG BEAVER COAL CO.	PO DRAWER 12, BEAVER, WV	WEBSTER	COWEN TRACT	555.00	10	
S-35-85	BIG CREEK COAL SALES		MCDOWELL		23.00	10	
EM-93	BIG FORK COAL CO.	PO BOX 147, SUMMERSVILLE, WV	NICHOLAS		2.00	20	
1-666	BIG FORK COAL CO.		NICHOLAS		2.00	34	
0-5061-87	BIG SANDY TERMINAL, INC	P.O. BOX 28, KENOVA, WV 25530	WAYNE	DOCKS CREEK RIVER TERMINAL	52.86	38	
U-126-83	BIG SPRUCE COAL CO.	BOX 208, SUMMERSVILLE, WV	NICHOLAS	NO. 1	8.00	20	46-02895
U-5114-96	BIRCHFIELD MINING, INC.	41 EAGLES RD, BECKLEY, WV	BOONE	BIRCHFIELD NO. 1	15.22	20	
131-80	BJORKMAN MINING CO.	17 HAREWOOD, MORGANTOWN, WV	PRESTON	MILLER	26.00	10	46-05453
S-37-81	BJORKMAN MINING CO.	17 HAREWOOD, MORGANTOWN, WV	PRESTON		35.00	10	46-05453
S-5093-87	BLACK GOLD OF WV, INC.	BOX 526, HAMLIN, WV 25532	LINCOLN	SURFACE MINE NO. 1	125.00	10	
1-655	BLACK LODE COAL CO.	BOX 175 GAULEY BRIDGE WV 25085	NICHOLAS		7.00	35	
UO-195	BLACK LODE COAL CO.	PO BOX 339, GAULEY BR., WV	NICHOLAS		2.00	20	
UO-223	BLACK LODE COAL CO.	PO BOX 339, GAULEY BR., WV	NICHOLAS		4.00	20	
U-55-85	BLACK LODE COAL CO.		NICHOLAS	MINE NO. 1	5.40	20	
U-3003-86	BLACK LODE COAL CO.		NICHOLAS	LILLY BRANCH #1	11.89	20	
U-3072-86	BLACK LODE COAL CO.	PO BOX 339, GAULEY BRIDGE, WV	NICHOLAS	SWISS NO. 1 & 2	5.00	20	
U-3073-86	BLACK LODE COAL CO.	PO BOX 339, GAULEY BRIDGE, WV	NICHOLAS	SWISS NO. 1 & 2	5.00	20	
U-3010-87	BLACK LODE COAL CO.	PO BOX 339, GAULEY BRIDGE, WV	NICHOLAS	LILLY BRANCH NO. 3	26.30	20	
U-3042-87	BLACK LODE COAL CO.	PO BOX 339, GAULEY BRIDGE, WV	NICHOLAS		5.00	20	
U-10-85	BLACK LODE COAL CO., INC.		NICHOLAS		3.30	20	
S-4014-89	BLACK OAK MINING, INC.	RT. 6, BOX 104-E, PRINCETON, WV	MCDOWELL	SAW PIT OPERATION	40.67	10	
R-4031-89	BLACK OAK MINING, INC.	RT 6 BOX 104-E PRINCETON, WV 24740	MCDOWELL		1.00		
U-4009-87	BLACK WOLF MINING CO., INC	RT 2, BOX 173-D, BLUEFIELD, VA	MCDOWELL	MINE NO. 2	10.00	20	
U-4021-86	BLACK WOLF MINING COMPANY	53 OAKLAND TRRCE, PRINCETON,WV	MCDOWELL	MINE NO. 1	26.00	20	
U-4025-89	BLACK WOLF MINING COMPANY	RT 2 BOX 173-D BLUEFIELD WV 24605	MCDOWELL	MINE NO 5	14.27		
D-62-82	BLUE CREEK COAL CO., INC.	PO BOX 290, GLASGOW, WV	KANAWHA		4.50	20	
D-111-82	BLUECO SALES & PROCESSING	PO BOX 727, IAEGER, WV	MCDOWELL	NO. 2	6.00	20	46-05862
UO-291	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL		2.00	20	
H-258	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	MCDOWELL		11.00	32	46-03404
H-269	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	MCDOWELL	HAULROAD	3.00	32	46-03404
H-403	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	MCDOWELL		14.00	32	
H-414	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	MCDOWELL	HAULROAD	65.00	32	46-03404
H-622	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	MCDOWELL		15.62	32	
0-60-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	MCDOWELL	LOADING POINT	34.00	38	46-05585
0-73-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	MCDOWELL		20.00	38	
U-81-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	MCDOWELL		9.70	20	
U-95-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	MCDOWELL		8.75	20	
U-96-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	MCDOWELL		9.51	20	
UO-423	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL		3.00	20	
UO-457	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL	NO 20	7.00	20	46-06109
UO-460	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL		3.00	20	
UO-607	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL		5.00	20	
UO-624	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	MCDOWELL		8.53	20	
D-11-82	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	WYOMING	MINE NO. 26	21.75	20	
D-61-83	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV 25801	WYOMING		22.00	38	
UO-644	BLUESTONE COAL CORP.	POBOX 1085 BECKLEY WV 25801	WYOMING	NO 25	8.00	20	
UO-150	BLUESTONE COAL CORP.	P O BOX 1085, BECKLEY, WV	MCDOWELL		8.58	20	
U-4015-87	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	WYOMING	MINE NOS. 30 & 31	7.70	20	
U-4016-87	BLUESTONE COAL CORP.	PO BOX 1085, BECKLEY, WV	WYOMING	MINE NOS. 30 & 31	8.40	20	
D-702	BLUESTONE COAL CORP.	BOX 1085, BECKLEY, WV	MCDOWELL		14.00	32	
U-4024-88	BLUESTONE COAL CORP.	P. O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 35	7.09	20	46-06460

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
U-4002-89	BLUESTONE COAL CORP.	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 38	4.29	20	
26-79	BLUESTONE COAL CORPORATION	PO BOX 1085, BECKLEY, WV	MCDOWELL	KEYSTONE NO. 6	660.00	10	46-03404
U-4007-88	BLUESTONE COAL CORPORATION	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL		3.88	20	
S-4021-88	BLUESTONE COAL CORPORATION	?.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	POCA II SEAM STRIP	32.79	10	
U-4023-88	BLUESTONE COAL CORPORATION	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 34	7.09	20	
U-4025-88	BLUESTONE COAL CORPORATION	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 36	9.01	20	
U-4035-88	BLUESTONE COAL CORPORATION	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 33	3.81	20	
D-4036-88	BLUESTONE COAL CORPORATION	P.O. BOX 1081, BECKLEY, WV 25801	MCDOWELL		25.98	32	
U-4001-89	BLUESTONE COAL CORPORATION	P.O. BOX 1085, BECKLEY, WV 25801	MCDOWELL	MINE NO. 37	2.85	20	
D-32-82	BOGGS & MURPHY MINING	BOX 86, FENWICK, WV 26202	NICHOLAS		3.00	20	
S-1042-86	BOLINGREEN MINING CO.		PRESTON		14.00	10	46-06319
S-1024-88	BOLINGREEN MINING COMPANY	ROUTE 2, BOX 299, ALBRIGHT, WV	PRESTON	BOLINGER MINE	21.00	10	
145-73	BOLOGNA MINING CO.	BOX 309 BURGETTSTOWN PA 15021	BROOKE	MINE NO. 805	85.00	10	46-02767
S-19-83	BOLOGNA MINING CO.	BOX 309 BURGETTSTOWN PA 15021	BROOKE	HALL MINES	30.00	10	46-04516
S-3005-88	BOMAC, LIMITED	BOX 369, ACCOVILLE, WV 25606	NICHOLAS	SURFACE NO. 1	30.00	10	
S-3001-89	BOMAC, LIMITED	BOX 369ACCOVILLE WV 25606	RALEIGH	SURFACE MINE NO. 2	45.00	10	
UO-159	BOONE, DANIEL COAL CO.		HARRISON	PIONEER NO. 1	10.00	20	46-02081
EM-32	BORGMAN COAL CO.	RT 4, TUNNELTON, WV 26444	PRESTON		5.90	20	
INC-4-78	BORTZ COAL CO.		MONONGALIA		5.00	10	46-05156
INC-4-81	BORTZ COAL CO.		MONONGALIA		5.00	10	46-05156
155-76	BRADFORD COAL COMPANY	13905 MCCKLE AVE CHESAPEAK WV	BOONE	MINE NO. 47	91.33	10	46-05266
UO-490	BRADFORD COAL COMPANY	13905 MACCORKLE AVE.SE CHESAPEAKE	BOONE		2.62	20	
H-364	BRADFORD COAL COMPANY	13905 MACCORKLE A,CHESAPEAK,WV	KANAWHA		27.00	32	
UO-656	BRADFORD COAL COMPANY	13905 MACCORKLE AVE., CHESAPEAKE,WV	KANAWHA	MINE NO. 48	3.27	20	
U-6010-87	BRADFORD COAL COMPANY	13905 MACCORKLE AVE CHESAPEAKE,WV	BOONE	NO. 81 MINE	8.92	20	
S-16-85	BRADLEY CONSTRUCTION CO IN	P.O. BOX 359, FAYETTEVILLE, WV	FAYETTE		74.00	10	
EM-97	BRADY CLINE COAL CO.		NICHOLAS		4.00	20	46-04796
P-645	BRADY CLINE COAL CO.	BOX 208, SUMMERSVILLE, WV	NICHOLAS		15.00	31	
R-668	BRADY CLINE COAL CO.		NICHOLAS	REFUSE AREA	26.30	33	46-03937
96-77	BRAMER COAL CO.		HARRISON		9.90	10	
U-5047-86	BRANDX MINING, INC.		LOGAN	BRANDY MINE NO. 1	10.18	20	
U-172-83	BRANDY MINING	BOX 474, GILBERT, WV 25621	LOGAN		17.00	20	
D-38-81	BRANDY MINING	BOX 474, GILBERT, WV	LOGAN		10.54	20	46-06427
U-72-85	BRANDY MINING		LOGAN	BRAND MINE NO. 1	2.50	20	46-06784
U-5045-86	BRANDY MINING, INC.		LOGAN	BRANDY MINE NO. 2	18.00	20	
O-5014-87	BRANDY MINING, INC.	DRAWER T, GILBERT, WV 25621	LOGAN	BRANDY HAULROAD	14.80	32	
U-5044-86	BRANDY MINING, INC.	DRAWER T, GILBERT, WV	LOGAN	MINE NO. 3	10.10	10	
S-76-84	BRAXTON MINERALS, INC.	PO BOX 286 WEBSTER SPRINGS WV 26288	WEBSTER		308.00	10	
S-2008-88	BRECKENRIDGE CORPORATION	P.O. BOX 247, BUCKHANNON, WV 26201	LEWIS	TENNEY TRACT	19.00	10	
S-51-82	BRIDGEPORT MINING CO.	PO BOX 59 JANE LEW, WV 26378	BARBOUR	GNATTY CREEK	78.00	10	46-06186
U-75-85	BRIGHT COAL		NICHOLAS	BEECH GLEN NO. 3	2.80	20	
O-3066-87	BRIGHT COAL CO.	PO BOX 460, SUMMERSVILLE, WV	FAYETTE	BIG CREEK HAULROAD NO. 1	26.00	32	
U-6008-88	BRIGHT COAL COMPANY	PO BOX 460, SUMMERSVILLE WV 26651	CLAY	DINGESS RUM U.O. NO. 1	10.00	20	46-07530
S-3053-86	BRIGHT COAL CORP.		NICHOLAS	NILE	208.00	10	46-07170
U-6018-86	BRIGHT COAL CORP.		CLAY	BARBARA LYNN U.O. NO. 1	32.34	20	
U-6037-86	BRIGHT COAL CORP.	PO BOX 460, SUMMERSVILLE, WV	CLAY	BARBARA LYNN NO. 2	55.00	20	
D-2054-86	BRIGHT COAL CORP.	BOX 460, SUMMERSVILLE, WV	RANDOLPH	BEECH RUN HAULROAD	21.00	32	
S-2055-86	BRIGHT COAL CORP.	PO BOX 460, SUMMERSVILLE, WV	RANDOLPH	BEECH RUN SURFACE MINE #1	202.40	10	
U-2003-87	BRIGHT COAL CORP.	PO BOX 460, SUMMERSVILLE, WV	RANDOLPH	BEECH RUN DEEP MINE NO. 1	32.60	20	
S-3020-87	BRIGHT COAL CORP.	P.O. BOX 460, SUMMERSVILLE,WV 26651	NICHOLAS	STANDARD MINE	34.00	10	
S-73-85	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	CLAY		238.20	10	
S-3064-86	BRIGHT COAL CORPORATION	PO BOX 460, SUMMERSVILLE, WV	NICHOLAS	ENON	65.50	10	
S-3089-87	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	NICHOLAS	NILE ROAD STRIP NO. 2	327.74	10	
S-3008-88	BRIGHT COAL CORPORATION	PO BOX 460, SUMMERSVILLE, WV 26651	FAYETTE	BIG CREEK STRIP NO. 1	321.00	10	
U-3029-88	BRIGHT COAL CORPORATION	PO BOX 460, SUMMERSVILLE, WV 26651	NICHOLAS	BEEC GLEN NO. 4 U.O.	3.72	20	

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S-3040-88	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	NICHOLAS	LINE CREEK STRIP NO. 1	117.00	10	
R-6013-88	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	CLAY	NO. 2 COMPLEX REFUSE AREA	55.00	33	
S-6025-88	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	CLAY	MONOC SURFACE MINE NO. 1	75.00	10	
S-3041-88	BRIGHT COAL CORPORATION	P.O. BOX 460, SUMMERSVILLE, WV	NICHOLAS	DINGESS RUN #5 BLOCK STRIP	390.00	10	
0-2037-88	BRIGHT COAL CORPORATION	BOX 460 SUMMERSVILLE WV 26651	RANDOLPH	HARTRIDGE HAULROAD	24.00	36	
S-6001-89	BRIGHT COAL CORPORATION	PO BOX 460 SUMMERSVILLE WV 26651	NICHOLAS	FALLEN TIMBER STRIP NO 1	75.00	10	
S-6014-89	BRIGHT MINING & LAND CO LT	PO BOX 460 SUMMERSVILLE WV 26651	CLAY	MONOC SURFACE MINE NO 3	166.34		
S-6019-89	BRIGHT MINING & LAND CO LT	PO BOX 460 SUMMERSVILLE WV 26651	CLAY/NICHO	MONOC SURFACE MINE NO 2	596.00		
H-529	BROOKS RUN COAL CO.	PO BOX 303, BIRCH RIVER, WV	BRAXTON		18.60	32	
H-451	BROOKS RUN COAL CO.	PO BOX 303, BIRCH RIVER, WV	BRAXTON		12.00	32	
H-562	BROOKS RUN COAL CO.	PO BOX 303, BIRCH RIVER, WV	BRAXTON		27.00	32	
P-612	BROOKS RUN COAL CO.	PO BOX 303, BIRCH RIVER, WV	WEBSTER		154.50	31	
R-529	BROOKS RUN COAL CO.		BRAXTON		18.60	33	
U-3071-86	BROOKS RUN COAL COMPANY	PO BOX 303 BIRCH RIVER, WV	NICHOLAS	FREEPORT #2 MINE	30.00	20	
0-3079-87	BRYNESIDE COLLIERIES, INC.	P.O. BOX 485, SUMMERSVILLE, WV	NICHOLAS	BIG FORK TIPPLE	2.00	34	
U0-548	BUCK RUN MINING	POBOX 155 GLENVILLE WV 26351	RANDOLPH		7.00	20	
D-48-81	BUCKHANNON FOREIGN SALES	PO BOX 507, BUCKHANNON, WV	BARBOUR		10.00	20	
108-80	BUFFALO COAL CO.	P O BOX 282 BAYARD WV	GRANT	STRIP NO. 6	60.00	10	46-0260
52-80	BUFFALO COAL CO.	P O BOX 282 BAYARD WV	GRANT	WESTERN MD NO. C1	191.00	10	46-0260
69-78	BUFFALO COAL CO.	P O BOX 282 BAYARD WV	GRANT		158.00	10	46-0260
75-80	BUFFALO COAL CO.	P O BOX 282 BAYARD WV	GRANT	STRIP NO. 6	120.00	10	46-0260
H-178	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		2.00	32	
H-463	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		22.00	32	
H-579	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		18.00	32	46-0660
H-621	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		4.00	32	
I-542	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		12.00	34	
D-40-84	BUFFALO COAL CO.	PO BOX 282, BAYARD, WV	GRANT		23.00	38	46-0260
0-96-83	BUFFALO COAL CO.	PO BOX 282, BAYARD, WV	GRANT	PREP. PLANT	50.00	31	
0-97-83	BUFFALO COAL CO.	PO BOX 282, BAYARD, WV	GRANT	REFUSE AREA	100.00	33	
S-112-82	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT	DEFFICULT NO. 2	70.00	10	46-0260
S-25-81	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	GRANT		101.00	10	46-0260
S-46-83	BUFFALO COAL CO.	PO BOX 282, BAYARD, WV 26707	GRANT		176.00	10	
122-80	BUFFALO COAL CO.	P O BOX 282 BAYARD WV 26707	PRESTON	KOVACH - WESTERN	306.00	10	46-02602
0-35-82	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	TUCKER		5.00	36	46-0260
S-26-81	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	TUCKER	COKETON	213.00	10	46-0260
S-120-85	BUFFALO COAL CO.		GRANT		62.00	10	46-02602
H-366	BUFFALO COAL CO.	POBOX 282 BAYARD WV 26707	TUCKER		3.00	32	
S-2006-86	BUFFALO COAL CO., INC.		GRANT		170.00	10	46-02602
S-2001-86	BUFFALO COAL CO., INC.		GRANT		595.00	10	46-0260
S-2011-87	BUFFALO COAL CO., INC.	PO BOX 282, BAYARD, WV 26707	GRANT	WYMER #3	107.00	10	
S-61-85	BUFFALO COAL CO., INC.		TUCKER		70.00	10	46-03013
150-78	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	GRANT	BARRO GATZMER	229.00	10	46-03013
53-80	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	GRANT	C-1	375.00	10	46-03013
S-100-84	BUFFALO COAL CO., INC.		GRANT	C-1 MINERAL S MOWRY	784.00	10	46-03013
S-32-84	BUFFALO COAL CO., INC.	PO BOX 282, BAYARD, WV	GRANT	C-1 TRACT. SOUTH END	170.00	10	46-03013
129-74	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	45.40	10	46-03013
146-77	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	73.00	10	46-03013
58-78	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	53.00	10	46-03013
7-80	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	390.00	10	46-03013
73-79	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	35.00	10	46-03013
74-76	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER	DAVIS NO. 41	135.00	10	46-03013
H-440	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER		1.00	32	
H-499	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER		44.00	32	
I-488	BUFFALO COAL CO., INC.	PO BOX 282 BAYARD WV 26707	TUCKER		20.00	34	
0-45-83	BUFFALO COAL CO., INC.	PO BOX 282, BAYARD, WV 26707	TUCKER		3.00	36	46-06602

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S-2003-88	BUFFALO COAL CO., INC.	P.O. BOX 282, BAYARD, WV 26707	TUCKER	A-34 MINE	354.00	10	
S-2018-88	BUFFALO COAL CO., INC.	P.O. BOX 282, BAYARD, WV 26707	TUCKER	GATZER MINE	92.00	10	
S-2043-88	BUFFALO COAL CO., INC.	P.O. BOX 282, BAYARD, WV 26707	TUCKER	LOST RUN HARLEN	60.00	10	
U-2003-89	BUFFALO COAL CO., INC.	P.O. BOX 282, BAYARD, WV 26707	TUCKER	BENBUSH MINE	17.00	20	
S-22-85	BUFFALO MINING CO	BOX 459, LYBURN, WV 25632	LOGAN		58.00	10	
U-17-83	BUFFALO MINING CO.	LYBURN, WV 25632	LOGAN		6.00	20	
203-73	BUFFALO MINING CO.	BOX 459, LYBURN, WV	LOGAN	LORANDO SURFACE MINE	1002.00	10	46-05743
0-27-81	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN		7.30	20	
D-28-81	BUFFALO MINING CO.	BOX 459 LYBURN WV 25632	LOGAN	ELKLICK NUMBER 3	6.25	20	46-05603
D-29-81	BUFFALO MINING CO.	BOX 459, LYBURN, WV	LOGAN	KRISTIE ANN NO. 2	7.90	20	46-05602
EM-94	BUFFALO MINING CO.	BOX 426, LYBURN, WV	LOGAN		10.00	20	
M-10	BUFFALO MINING CO.	BOX 459 LYBURN WV 25632	LOGAN		100.00	32	
0-123-83	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN		91.34	33	
0-19-84	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN		120.00	33	
0-92-83	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN	ELKLICK DOCK	7.90	34	46-04315
0-98-83	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN	NO. 5 PREP PLANT	51.00	31	46-02140
U-114-83	BUFFALO MINING CO.		LOGAN		2.90	20	
U-196-83	BUFFALO MINING CO.	BOX 459 LYBURN WV 25632	LOGAN		12.89	20	
U-210-83	BUFFALO MINING CO.	BOX 459 LYBURN WV 25632	LOGAN		2.57	20	
U-68-84	BUFFALO MINING CO.	BOX 459, LYBURN, WV	LOGAN		8.64	20	
U-98-83	BUFFALO MINING CO.	GEN. DEL., LYBURN, WV	LOGAN	CEDAR GROVE NO. 2	2.72	20	46-06680
U-99-83	BUFFALO MINING CO.	GEN. DEL., LYBURN, WV	LOGAN		3.89	20	
UO-189	BUFFALO MINING CO.	BOX 459, LYBURN, WV 25632	LOGAN		1.52	20	46-01375
UO-437	BUFFALO MINING CO.		LOGAN	NO 1 MINE	4.52	20	46-05989
U-44-85	BUFFALO MINING CO.		LOGAN	DINGESS BRANCH NO. 1	9.00	20	
S-5031-86	BUFFALO MINING CO.		LOGAN	SURFACE MINE NO. 3	494.00	10	46-01375
U-5066-86	BUFFALO MINING CO.	P. O. BOX 459 LYBURN, WV 25632	LOGAN	CAMP BR. 1-A & NO. 2 MINE	9.99	20	
U-5037-86	BUFFALO MINING COMPANY	BOX 459, LYBURN, WV 25632	LOGAN	CAMP BRANCH MINE NO. 3	4.50	20	
U-5086-86	BUFFALO MINING COMPANY	BOX 459, LYBURN, WV 25632	LOGAN	NORTH FORK NO. 2 MINE	1.80	20	
U-5028-88	BUFFALO MINING COMPANY	P.O. BOX 459, LYBURN, WV 25632	LOGAN	NORTH FORK NO. 3 MINE	3.97	20	46-06803
U-6016-87	BUFFLICK INC.	DRAWER L, CEDAR GROVE, WV	KANAWHA	NO. 1 MINE	8.40	20	46-07344
U-38-85	BUFFLO COAL CO.		TUCKER	A-34 MINE	66.00	20	
U-134-83	BULL DOG MINING, INC.	BOX 2530, WILLIAMSON, WV 25661	LOGAN		8.20	20	
UO-473	BULL RUN MINING		PRESTON	MEREDITH	1.00	20	46-04266
EM-66	BULL RUN MINING CO.	PO BOX 235, REEDSVILLE, WV	PRESTON		5.00	20	46-04266
U-1020-89	BULL RUN MINING CO., INC.	PO BOX 235 REEDSVILLE, WV 26547	PRESTON	FRONTIER MINE	10.00	20	
145-76	BURFORD, S.S. JOE		RANDOLPH	GR NO. 3	190.00	10	46-02481
211-74	BURFORD, S.S. JOE		RANDOLPH	GR NO. 1	95.00	10	46-02481
68-76	BURFORD, S.S. JOE		RANDOLPH	GR NO. 2	108.00	10	46-02481
89-77	BURFORD, S.S. JOE		RANDOLPH	GR NO. 4	119.00	10	46-02481
UO-166	BURFORD, S.S. JOE		RANDOLPH	HEWITT FORK NO. 5	4.00	20	46-05658
UO-341	BURFORD, S.S. JOE		RANDOLPH		1.00	20	46-06235
UO-476	BURFORD, S.S. JOE		RANDOLPH		7.80	20	
UO-383	BURKE MOUNTAIN TRUCKING	BOX 976 TAZEWELLE, VA 24630	MCDOWELL		3.50	20	
U-231-83	BURKE MOUNTAIN TRUCKING CO	BOX 976 NORTH TAZEWELL VA 24630	MCDOWELL		7.20	20	
U-4011-88	BURKE MOUNTAIN TRUCKING CO	BOX 976, N. TAZWELL, VA 24630	MCDOWELL	MUDHOLE MINE	8.66	20	
S-1081-86	BYRON CONSTRUCTION CO. INC	PO BOX 2270, CLARKSBURG, WV	HARRISON	HARRISON TRACT	25.00	10	
S-56-85	BYRON CONSTIURCTION CO INC	P.O. BOX 2270, CLARKSBURG, WV	LEWIS		90.00	10	46-04497
UO-36	C & C COMPANY		LOGAN		8.00	20	
U-4017-89	C & D TRUCKING INC	PO BOX 1104 IAEGER WV 24844	MCDOWELL	MINE NO 1	14.71	20	
EM-55	C & G COAL COMPANY, INC.	BOX 329, SWITZER, WV 25647	LOGAN	NO. 1	6.80	20	46-05936
S-1015-86	C & J COAL CO.		MONONGALIA		20.00	10	46-06597
S-1006-89	C & J COAL COMPANY	P.O. BOX 82, POINT MARION, PA 15474	MONONGALIA	WYMER TRACT MINE	36.00	10	
S-20-85	C & M COAL CONTRACTING		HARRISON		23.50	10	
S-1005-86	C & M COAL CONTRACTING		HARRISON		69.00	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
S-5619	C & P COAL COMPANY	914 GOFF BLDG. CLARKSBURG, WV	TAYLOR		50.00	10	
113-78	C & W COAL		BARBOUR	STRIP NO. 1	50.00	10	46-0232
U-64-85	C & W COAL		BARBOUR	REDSTONE NO. 7 MINE	55.00	20	
255-76	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR	STRIP NO. 1	70.00	10	46-0232
H-253	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR		6.00	32	
H-278	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR		6.00	32	
H-329	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR		2.00	32	
H-576	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR		4.90	32	
0-71-82	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR		16.00	32	
0-84-83	C & W COAL CO.		BARBOUR	PEPPER #4 TIPPLE	19.54	34	
S-1-84	C & W COAL CO.	P O BOX 569 CLARKSBURG, WV	BARBOUR	STRIP NO. 1	109.36	10	46-0232
S-128-82	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR	STRIP NO. 1	102.50	10	46-0232
S-55-82	C & W COAL CO.	POBOX 569 CLARKSBURG WV 26301	BARBOUR	STRIP NO. 1	9.70	10	46-0232
U0-568	C & W COAL CO.	PO BOX 569, CLARKSBURG, WV	BARBOUR		13.48	20	
U0-750	C & W COAL CO.	P O BOX 569 CLARKSBURG, WV	BARBOUR		13.74	20	
0-38-85	C & W COAL CO., INC.	POBOX 1744 CLARKSBURG WV 26301	BARBOUR		28.00	34	
S-2058-86	C & W COAL CO., INC.	PO BOX 569, CLARKSBURG, WV	BARBOUR	#1 SURFACE MINE	59.30	10	
U-2015-87	C & W COAL CO., INC.	PO BOX 569, CLARKSBURG, WV	BARBOUR	REDSTONE # 8A & PITTS #3	23.50	20	
0-2022-88	C & W COAL COMPANY	P.O. BOX 569, CLARKSBURG, WV 26302	BARBOUR	HAUL ROAD	9.29	32	
S-2049-88	C & W COAL COMPANY	P.O. BOX 569, CLARKSBURG, WV 26302	BARBOUR	SURFACE MINE NO. 1	35.30	10	
0-2006-89	C & W COAL COMPANY	PO BOX 569 CLARKSBURG WV 26302	BARBOUR	SURFACE MINE NO. 1	28.28	33	46-0232
U-4035-86	C L & S COAL COMPANY, INC.	BOX 114, IAEGER, WV 24844	WYOMING	MINE NO. 5	3.50	20	
9-81	C. J. COAL	POBOX 587 BUCKHANNON WV 26201	BARBOUR	WHITE NO. 2	39.00	10	46-0453
0-83-83	C. J. COAL	PO BOX 587, BUCKHANNON, WV	HARRISON		3.00	34	46-0453
S-2008-89	C. J. COAL CORPORATION	PO BOX 587 BUCKHANNON WV 26201	UPSHUR	HACKERS CREEK NO SURFACE	91.80	10	
S-115-82	C.C. CONLEY & SONS	GEN DEL WALTON WV 25286	NICHOLAS		140.20	10	
162-72	C.C. CONLEY & SONS	GEN DEL WALTON WV 25286	NICHOLAS	HUTCHINSON CREEK	71.00	10	46-0380
215-74	C.C. CONLEY & SONS	GEN. DEL., WALTON, WV	NICHOLAS	HUTCHINSON CREEK	170.00	10	46-0380
43-79	C.C. CONLEY & SONS	GEN. DEL., WALTON, WV 25286	NICHOLAS	WHITE WATER	150.00	10	46-0599
1-683	C.C. CONLEY & SONS	GEN. DEL., WALTON, WV 25286	NICHOLAS		2.00	34	
1-684	C.C. CONLEY & SONS	GEN. DEL., WALTON, WV 25266	NICHOLAS	TIPPLE NO. 1	2.00	34	
S-89-85	C.J. COAL	POBOX 587 BUCKHANNON WV 26201	BARBOUR		16.00	10	46-04535
U0-741	C.L. & S. COAL		WYOMING	NO. 1	3.60	20	
S-28-85	C.W.BENTLEY		RANDOLPH		10.00	10	
223-76	CALIFORNIA FUEL CO.		NICHOLAS	SURFACE NO.2	100.00	10	46-05415
S-48-83	CALVERY ENTERPRISES		MINGO	CALVERY SURFACE NO. 1	10.00	10	46-06644
55-81	CAMPBELL MINING CO.		FAYETTE		56.00	10	
U-4010-86	CANDICE COAL CO.		WYOMING	NO. 2 MINE	13.20	20	
U-4037-86	CANDICE COAL COMPANY	107 GEORGE ST., BECKLEY, WV	WYOMING	MINE NOS. 4 AND 5	4.20	20	
U-4038-86	CANDICE COAL COMPANY	107 GEORGE ST., BECKLEY, WV	WYOMING	MINE NOS. 4 AND 5	4.20	20	
U-2-85	CANION COAL CO.		CLAY	NUMBER A 1	10.00	20	46-01223
S-6031-86	CANNELTON IND., INC.	BOX 150 CANNELTON WV 25036	FAYETTE		92.30	10	
S-79-84	CANNELTON INDUSTRIES	PO BOX 446, PEYTONA, WV	BOONE	WINIFREDE STRIP	119.00	10	46-06885
0-141-83	CANNELTON INDUSTRIES	PO BOX 446, PEYTONA, WV 25154	BOONE	BURNSIDE BRANCH REFUSE	20.19	33	
D-101-82	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	BOONE	MINE NO. 5	8.30	20	46-04747
D-80-82	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	BOONE	NO. 1	11.27	20	46-02061
D-88-82	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	BOONE		6.40	20	
H-285	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	BOONE		10.00	32	
0-36-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	BOONE		149.84	33	
0-37-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	BOONE	INDIAN CREEK NO. 2	51.60	31	46-05992
0-46-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	BOONE		15.20	31	
0-52-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	BOONE		8.80	36	
U0-509	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	BOONE		4.70	20	
U0-510	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	BOONE	CROOKE RUN NO. 2	8.36	20	46-06175
45-77	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	FAYETTE		590.00	10	46-06410

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
615-70C	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	FAYETTE	CANNELTON STRIP	2010.00	10	46-02355
D-60-82	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV 25036	FAYETTE		26.00	20	
D-95-8C	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	FAYETTE	MINE NO. 10	10.00	20	46-01909
4-81	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA	MARINES MUSEUM	905.00	10	46-02355
83-79	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA	NO. #	535.40	10	46-02355
D-100-82	CANNELTON INDUSTRIES	GEN. DEL., CANNELTON, WV	KANAWHA	MINE NO. 8	13.40	20	46-01324
0-75-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA	LADY DUNN PREP PLANT	67.20	33	46-03317
S-127-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA		104.50	10	
S-2-82	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA		522.85	10	
S-6-81	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA	NO. 9 D	117.00	10	46-06410
S-6-84	CANNELTON INDUSTRIES		KANAWHA		1224.53	10	
S-88-83	CANNELTON INDUSTRIES	GEN DEL CANNELTON WV 25036	KANAWHA	NO. 9 E	1013.97	10	
U-55-84	CANNELTON INDUSTRIES	BOX 150, CANNELTON, WV 25036	KANAWHA		22.40	20	
D-59-82	CANNELTON INDUSTRIES	GEN. DEL., SUPERIOR, WV	MCDOWELL	NO 4-8	2.60	20	46-01403
D-63-82	CANNELTON INDUSTRIES	GEN DEL, SUPERIOR, WV	MCDOWELL	ROADSIDE MINE	5.00	20	46-01403
D-64-82	CANNELTON INDUSTRIES	GEN. DEL., SUPERIOR, WV	MCDOWELL	FIRECREEK NO. 12	5.82	20	46-04108
D-79-82	CANNELTON INDUSTRIES	GEN DEL SUPERIOR, WV	MCDOWELL	SUPERIOR PREP PLANT & REF	87.10	31	46-07131
U-73-84	CANNELTON INDUSTRIES		MCDOWELL	NO 16	10.00	20	46-09680
U-74-84	CANNELTON INDUSTRIES	GEN. DEL., SUPERIOR, WV	MCDOWELL		10.00	20	
UO-199	CANNELTON INDUSTRIES	GEN. DEL., SUPERIOR, WV	MCDOWELL	TRUE ENERGY	1.70	20	46-06404
UO-34	CANNELTON INDUSTRIES	GEN. DEL., SUPERIOR, WV	MCDOWELL	LICK BR. #1	7.00	20	46-05509
U-29-85	CANNELTON INDUSTRIES		KANAWHA		15.00	20	
U-30-85	CANNELTON INDUSTRIES		BOONE		34.64	20	
U-43-85	CANNELTON INDUSTRIES		BOONE	MINE NO. 1A	8.55	20	
S-70-85	CANNELTON INDUSTRIES		KANAWHA		34.00	10	46-07268
S-78-85	CANNELTON INDUSTRIES		KANAWHA		535.07	10	46-06886
UO-356	CANNELTON INDUSTRIES	GEN DEL, CANNELTON, WV 25036	BOONE		3.30	20	
UO-454	CANNELTON INDUSTRIES INC.	GEN. DEL., CANNELTON, WV 25036	KANAWHA		48.62	20	
U-6016-86	CANNELTON INDUSTRIES, INC		BOONE	MINE #6	12.00	20	
S-6008-86	CANNELTON INDUSTRIES, INC.		KANAWHA		329.70	10	
R-4-81	CANNELTON INDUSTRIES, INC.	GEN DEL CANNELTON WV 25036	KANAWHA		18.00	33	46-05687
U-6018-89	CANNELTON INDUSTRIES, INC.	PO BOX 150 CANNELTON WV 25036	KANAWHA		3.54	20	
NONE	CAP RUN COAL CO.		LEWIS	CAP RUN TIPPLE	1.00	34	
116-79	CAPITOL COALS		UPSHUR	REX ROAD - WILLIAM	18.00	10	46-05718
23-81	CAPITOL COALS	P.O. BOX 704, BUCKHANNON, WV	UPSHUR	TURKEY RUN	21.00	10	46-05718
0-122-83	CAPITOL FUELS	PO BOX 408, EAST BANK, WV	KANAWHA		14.00	38	
200-76	CAPPELLARI	720 S. KANAWHA ST. BECKLEY WV	NICHOLAS	NO. 5	76.00	10	46-04942
UO-282	CARBON FUEL		KANAWHA	#2	6.00	20	46-06102
R-4-84	CAREERS		CLAY		43.40	33	
0-15-82	CARL M. GUEPEL CONST CO.	PO BOX 20911 COLUMBUS OH 43220	MCDOWELL		0.80	38	
EM-108	CARTER ROAG	PO BOX 2327, ELKINS, WV	RANDOLPH	MINES #1 #2 #5	12.62	20	46-05809
0-11-82	CARTER ROAG	PO BOX 2327, ELKINS, WV	RANDOLPH		13.30	33	
U-111-83	CARTER ROAG	PO BOX 2327, ELKINS, WV 26241	RANDOLPH	#1A	19.33	20	46-04461
0-31-85	CARTER-ROAG COAL CO		RANDOLPH		86.40	33	46-04461
U-47-85	CARTER-ROAG COAL CO		RANDOLPH	MINE NO. 1 B	12.80	20	
0-2031-86	CARTER-ROAG COAL CO., INC.	ONE PGP PLACE PITTSBURGH PA	RANDOLPH	STAR BRIDGE PREP PLANT	22.80	31	
S-5025-86	CATENARY COAL COMPANY	PO BOX 190, HANSFORD, WV 25103	LOGAN		349.00	10	
H-42	CATENARY COAL COMPANY	POBOX 190 HANSFORD WV 25103	KANAWHA		20.00	32	
0-5064-86	CATENARY COAL COMPANY	PO BOX 190, HANSFORD, WV 25103	LOGAN		12.80	32	
U-5063-86	CATENARY COAL COMPANY	PO BOX 190, HANSFORD, WV 25103	LOGAN	AREA 7 DEEP MINE	24.90	20	
H-15	CEDAR COAL CO.	ONE PPG PLACE, PITTS., PA	BOONE	CUT 26	11.00	32	46-02732
D-115-82	CENTRAL COAL CO.	PO BOX 190, NEW HAVEN, WV	MASON	PHILIP SPORN	23.00	20	
0-54-85	CENTRAL COAL PROCESSING		NICHOLAS		19.00	34	46-06976
U-66-85	CENTRAL MINGO COAL COMPANY	P.O. BOX 119, NAUGATUCK, WV 25685	MINGO	MINE NO. 1	55.60	20	
S-58-82	CENTURY ENTERPRISES	PO BOX 45, EAST MCKEESPORT, PA	PRESTON	DEBERRY	58.00	10	46-04275

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
U-70-85	CHAFIN COAL		LOGAN		7.60	20	
D-13-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV	LOGAN		6.42	20	
D-14-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV	LOGAN		3.00	20	
D-17-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV 25601	LOGAN		4.02	20	
D-20-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV	LOGAN		3.58	20	
D-45-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV 25601	LOGAN	NO. 6	3.58	20	46-0460
O-16-82	CHAFIN COAL CO.		LOGAN		13.95	20	
O-16-85	CHAFIN COAL CO.	P.O. BOX 338, LOGAN, WV 25601	LOGAN		9.64	31	46-0205
O-69-82	CHAFIN COAL CO.	POBOX 338 LOGAN WV 25601	LOGAN		27.00	33	
U-140-82	CHAFIN COAL CO.	PO BOX 338, LOGAN, WV 25601	LOGAN		8.10	33	
U-5027-86	CHAFIN COAL CO.		LOGAN		6.00	20	
U-5078-86	CHAFIN COAL CO.		LOGAN	NO. 16C	7.30	20	
U-5016-87	CHAFIN COAL COMPANY	PO BOX 338, LOGAN, WV 25601	LOGAN	17C DEEP MINE	10.00	20	
U-5069-87	CHAFIN COAL COMPANY	P.O. BOX 638, MAN, WV 25635	LOGAN	DEEP MINE 18C	10.00	20	
UO-21	CHAFIN COAL COMPANY, INC.	P.O. BOX 2195, HUNTINGTON, WV	LOGAN	NO. 15C	4.10	20	
UO-220	CHAPMANVILLE CONSTRUCTION	PO BOX 338, CHAPMANVILLE, WV	LOGAN		1.99	20	
UO-595	CHAPMANVILLE CONSTRUCTION	P.O. BOX 187, MCCONNELL, WV 25633	LOGAN	MINE NO. 1	4.15	20	46-05706
INC-4-84	CHARLES E. DECKER		LOGAN		5.40	20	
20-81	CHERRY POND COAL CO.		MONONGALIA		2.00	10	
194-71	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE 26205	BOONE		207.00	10	
241-76	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	KENNY HAWKINS, ETC...	374.00	10	46-02491
27-74	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	CHESTNUT NO. 2	56.70	10	46-02724
28-79	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	SURFACE NO. 1	103.30	10	46-02724
29-78	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		67.00	10	
53-75	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	BEAVER	50.00	10	46-02774
59-77	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	MILLS CREEK NO. 3	217.80	10	46-02724
59-81	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	KENNY HAWKINS TRACT.	58.00	10	46-02724
81-76	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	SUGAR CAMP	125.90	10	46-02724
H-125	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	KENNY HAWKINS	30.00	10	46-02724
H-223	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		34.00	32	
H-628	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		23.00	32	
H-658	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		7.00	32	
H-84	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		11.00	32	46-02724
S-67-82	CHERRY RIVER COAL & COKE	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		8.30	36	
UO-725	CHESINUT RIDGE COAL		NICHOLAS	TIOGA-WIDEN NO. 1	35.00	10	46-03184
44-81	CHESINUT RIDGE COAL		MINERAL	POTOMAC MANOR #1	7.50	20	
I-582	CHESINUT RIDGE COAL	PO BOX 277, ELK GARDEN, WV	MINERAL		29.00	10	
S-28-83	CHESTNUT RIDGE COAL	PO BOX 227, ELK GARDEN, WV	MINERAL		24.00	34	
UO-689	CHESINUT RIDGE COAL	PO BOX 277, ELK GARDEN, WV	MINERAL	HANLIN	30.00	10	46-06621
36-80	CHEYENNE SALES CO., INC.	207 E PIKE ST., CLARKSBURG, WV	MINERAL		11.00	20	46-06329
O-11-83	CHEYENNE SALES CO., INC.	207 E. PIKE ST., CLARKSBURG, WV	UPSHUR	JAMES LAROSA	75.00	10	46-06480
O-2025-86	CHEYENNE SALES CO., INC.	207 E. PIKE ST., CLARKSBURG,WV	UPSHUR	RAWHIDE TIPPLE	20.50	31	
O-47-83	CHIEFTAIN DEVELOPEMENT CO.	POBOX 2248 CLARKSBURG WV 26301	UPSHUR	RAWHIDE #2	14.50	34	
U-2023-87	CHIEFTAIN MINING CO., INC.	PO BOX 159, JANE LEW, WV	HARRISON	CHIEFTON TIPPLE	1.70	31	
O-3003-88	CIRCLE H COAL CO., INC.	GEN. DEL., FRANKFORD, WV 24938	LEWIS	CHIEFTAIN #3	10.00	20	
U-4005-87	CLASSIC COAL SALES, INC.	PO BOX 1084, BLUEFIELD, VA	GREENBRIER	CIRCLE H COAL YARD	10.00	34	
U-185-83	CLAY KITTANNING COAL CO.	PO BOX 296, SUMMERSVILLE, WV	MCDOWELL	MINE NO. 1	10.00	20	
S-77-84	CLEAR CREEK FUEL	PO BOX 990, LEWISBURG, WV	CLAY		5.30	20	46-04305
UO-27	CLEAR CREEK FUEL	BOX 990, LEWISBURG, WV	GREENBRIER	SURFACE MINE NO. 7	40.00	10	46-06550
H-353	CLEAR CREEK FUEL	BOX 957 LEWISBURG WV 24901	GREENBRIER	MINE NO. 1	9.00	20	46-07084
O-99-83	CLEAR CREEK FUEL	PO BOX 990, LEWISBURG, WV	GREENBRIER		30.00	32	
R-681	CLEAR CREEK FUEL	PO BOX 990, LEWISBURG, WV	GREENBRIER		6.00	34	
H-21	CLEAR CREEK FUEL		GREENBRIER		7.50	33	
S-3062-86	CLELL KEY COAL CO.		GREENBRIER		6.30	32	
U-4003-88	CLICK & LEFFEW COAL CO INC	P.O. BOX 87, IAEGER, WV 24844	NICHOLAS		32.00	10	
			WYOMING		3.03	20,	46-05128

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA 1
U-4008-88	CLICK & LEFFEW COAL CO INC	P.O. BOX 87, IAEGER, WV 24844	WYOMING	SEWELL NO. 2 MINE	2.20	20	
UO-717	CLICK & LEFFEW COAL CO.	BOX 114, IAEGER, WV	WYOMING		3.32	20	
U-115-83	CLICK & LEFFEW COAL CO.	BOX 3253, CHARLESTON, WV	WYOMING		1.96	20	
U-4020-86	CLINCH VALLEY COAL CORP.	58100 E. RIVERSIDE DR, TAZWELL, VA	MCDOWELL	HORSPEN NO. 1 MINE	18.74	20	
U-4032-88	CLINCH VALLEY COAL CORP.	BX 581-D E RIVERSIDE DR, TAZWELL VA	MCDOWELL	MINE NO. 5	12.00	20	
D-93-82	CLINE BROTHERS	PO BOX 502, BAISDEN, WV	LOGAN		8.20	20	
UO-444	CLINE BROTHERS		LOGAN	MINE #2	5.00	20	46-06031
U-5036-86	CLINE BROTHERS, INC.		LOGAN	MINE NO. 4	10.00	20	
U-5071-87	CLOVERLICK LAND COMPANY	200 N BROADWAY, ST. LOUIS, MO	LOGAN	LATROBE MINE	24.57	20	46-02517
R-10-81	COAL CAVE	PO BOX 90, GLEN JEAN, WV	FAYETTE		12.00	33	
93-80	COAL CORP. OF AMERICA	PO BOX 631, WEBSTER SPRINGS, WV	WEBSTER	EXCELSOR RIDGE	582.00	10	46-06259
S-2007-86	COAL CORP. OF AMERICA INC		WEBSTER	LOST RUN STRIP NO. 1	70.00	10	
D-2032-86	COAL CORP. OF AMERICA, IN		WEBSTER	COWEN COALS, INC LOADOUT	1.50	34	
S-2010-86	COAL CORP. OF AMERICA, INC	PO BOX 631, WEBSTER SPRINGS,WV	WEBSTER		315.00	10	
U-2033-87	COAL CORP. OF AMERICA, INC	P.O.BOX 631, WEBSTER SPRINGS, WV	WEBSTER	LOST RUN DEEP MINE NO. 1	26.70	20	
S-2040-86	COAL CORP. OF AMERICA,INC.	PO BOX 631, WEBSTER SPRINGS,WV	WEBSTER	ROAD FORK STRIP NO. 1	89.00	10	
BOR-1004	COAL ENTERPRISES	DRAWER J COALWOOD WV 24824	MCDOWELL	LAMAX RAIL SIDING	7.25	34	46-06292
D-108-82	COAL ENTERPRISES	DRAWER J, COALWOOD, WV	MCDOWELL		2.40	20	
R-6-81	COAL ENTERPRISES		MCDOWELL	COALWOOD REPROCESS	18.30	33	46-06221
S-120-82	COAL ENTERPRISES, INC.	BOX 155, COALWOOD, WV 24824	MCDOWELL		403.63	10	
D-333	COAL KING CORPORATION	PO BOX 257 DANIELS, WV 25832	RALEIGH	TARRAH LEIGH MINE	8.00	20	
20 75	COAL LICK COAL CO.	MARY RUTH CORP, KINGWOOD, WV	PRESTON		30.00	10	46-03726
215-75	COAL LICK COAL CO.	RT 2, BOX 34, ALBRIGHT, WV	PRESTON	FORMAN BEEGHLY	65.20	10	46-03726
U-3044-89	COAL POWER CORPORATION	1033 QUARRIER ST. CHARLESTON WV 253	FAYETTE	MAHAN NO. 1	9.98		
EM-126	COAL RESOURCES	24 AMHEARST RD, MORGANTOWN, WV	MONONGALIA		5.00	20	
6-76	COALEX		LEWIS		26.30	10	46-02737
S-37-82	COALMAC, INC.	108 PINERIDGE DR. BECKLEY WV	FAYETTE		77.00	10	46-06455
S-38-83	COALMAC, INC.	108 PINERIDGE DR. BECKLEY WV	FAYETTE	SUN	21.00	10	46-06455
S-66-84	COALMAC, INC.		FAYETTE		75.40	10	
S-92-83	COALMAC, INC.	108 PINERIDGE DR. BECKLEY WV	FAYETTE	SUN	58.00	10	46-06455
S-118-85	COALMAC, INC.		FAYETTE		49.70	10	
S-3044-86	COALMAC, INC.		FAYETTE	NO. 4 SURFACE MINE	47.80	10	
S-3030-87	COALMAC, INC.	108 PINERIDGE DR, BECKLEY, WV	FAYETTE	SWEETWOOD SURFACE MINE	57.85	10	
I-468	COALTRAIN	POBOX 267 REEDSVILLE WV 26547	PRESTON		2.30	35	
S-38-81	COALTRAIN	POBOX 267 REEDSVILLE WV 26547	PRESTON		58.60	10	46-05452
S-38-84	COALTRAIN		PRESTON	DIRT WORKS	64.00	10	46-05452
S-1003-86	COALTRAIN CORP.		TAYLOR		100.00	10	
S-1022-86	COALTRAIN CORP.		PRESTON		107.00	10	46-05452
S-1003-87	COALTRAIN CORP.	PO BOX 267, REEDSVILLE, WV	TAYLOR	LONG RUN SURFACE MINING	149.00	10	
S-1031-89	COALTRAIN CORPORATION	PO BOX 267 REEDSVILLE WV 26547	TAYLOR	WENDEL SURFACE MINE No 1	183.00	10	
U-71-85	COLONY BAY COAL		BOONE		17.40	20	
S-15-81	COLONY BAY COAL CO.	POBOX 1085 BECKLEY WV 25801	BOONE		1347.10	10	46-06272
S-67-83	COLONY BAY COAL CO.	PO BOX 1085, BECKLEY, WV	BOONE		115.00	10	46-06272
U-5068-86	COLONY BAY COAL CO.		BOONE	COALBURG MINE NO.	4.30	20	
0-22-82	COLUMBIA COAL GAS		WAYNE		18.00	31	
0-119-83	COLUMBIA COAL GASIFICATION	PO BOX 1100, ASHLAND, KY	WAYNE		26.59	34	
S-106-82	COLUMBIA COAL GASIFICATION	PO BOX 1100, ASHLAND, KY 41101	WAYNE	NO. 1	46.40	10	46-06606
S-8-85	COLUMBIA COAL GASIFICATION	PO BOX 1100, ASHLAND, KY 41101	WAYNE		72.00	10	
H-524	COLUMBIA GAS TRANSMISSION		KANAWHA		11.00	36	
S-3028-89	COMFORT RUN COAL COMPANY	BOX 147 FAYETTEVILLE WV 25840	FAYETTE	LAYLAND NO. 1	42.97	10	
14-81	COMMANCHE COAL CO.	BOX 49, AMHERSTDALE, WV	LOGAN	BUSHFORK NO. 1	161.64	10	46-06301
S-1015-89	COMMUNITY COAL COMPANY INC	RT 2 BOX 2068 LOST CREEK WV 26385	HARRISON	MARTIN TRACT	14.98	10	
0-101-83	COMPLIANCE PROCESSING		TAYLOR	TIPPLE	3.90	34	
S-1061-86	CONAN COAL, INC.		MONONGALIA	MINE NO. 1	10.00	10	46-07033
198-77	CONCORD COAL CO.	POBOX 20911 COLUMBUS OH 43220	LOGAN	CONCORD NO. 1	185.00	10	46-05171

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
H-358	CONCORD COAL CO.	POBOX 20911 COLUMBUS OH 43220	LOGAN	FREEZE FORK BAOD	23.00	32	46-05171
09-80	CONCORDE	PO BOX 1066, MORGANTOWN, WV	MONONGALIA		12.00	10	46-04662
0-63-83	CONCORDE	PO BOX 1080, MORGANTOWN, WV	MONONGALIA	REFUSE #2	13.62	33	
0-82-83	CONCORDE	PO BOX 1080, MORGANTOWN, WV	MONONGALIA		13.99	31	46-05586
S-1-85	CONCORDE		MONONGALIA		20.00	10	46-05486
S-19-84	CONCORDE	PO BOX 1066, MORGANTOWN, WV	MONONGALIA	WINDY HILL	25.50	10	
S-22-84	CONCORDE		MONONGALIA	SNYDER	22.00	10	46-04662
S-57-83	CONCORDE	PO BOX 1066, MORGANTOWN, WV	MONONGALIA	MOORE	11.30	10	46-04662
S-104-85	CONCORDE		MONONGALIA		68.00	10	
0-6006-88	CONCRETE SUPPLY CORP.	1500 KANAWHA BLVD, CHARLESTON, WV	KANAWHA	JEFFERSON DOCK	19.50	34	
U-37-84	CONDOR DEVELOPMENT		MARION		3.90	20	
NONE	CONRAD CONTRACTORS		HARRISON	TIPPLE	1.30	34	
08-78	CONSOLIDATION COAL		HARRISON		110.00	10	46-03240
U-104-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	HARRISON	#95 ROBINSON RUN	1081.78	20	46-01454
U-100-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MARION	FOUR STATES #20	195.70	20	
U-78-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MARION	LOVERIDGE #22	546.20	20	
UO-431	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MARION	DENTS RUN	15.60	20	
U-141-82	CONSOLIDATION COAL	450 RACETRACK RD, WASHINGTO,PA	MARSHALL	SHOEMAKER MINE	239.00	20	46-01436
U-171-83	CONSOLIDATION COAL	450 RACETRACE RD WASHINGTON PA	MARSHALL	IRELAND	149.29	20	
U-119-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	HUMPHREY #7	376.50	20	
U-45-84	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	BLACKSVILLE #1 MINE	101.50	20	
U-46-84	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	BLACKSVILLE #2 MINE	267.88	20	
U-53-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	OSAGE #3	110.58	20	46-01455
U-70-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	ARKWRIGHT #1	443.24	20	
U-86-83	CONSOLIDATION COAL	PO BOX 1314, MORGANTOWN, WV	MONONGALIA	PURSGLOVE #15	214.26	20	46-01454
U-35-85	CONSOLIDATION COAL CO.		WYOMING		5.30	20	46-01243
UO-594	CONSOLIDATION COAL CO.	PO BOX 1287, BLUEFIELD, VA	WYOMING	NOSEMAN MINE	6.35	20	46-06209
102-78	CONSOLIDATION COAL CO.	POBOX 1289 BLUEFIELD VA 24605	MCDOWELL	ROCKHOUSE BR.	247.00	10	46-02762
28-81	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MCDOWELL	SHAWNEE SURFACE	468.00	10	46-06047
0-10-85	CONSOLIDATION COAL CO.	P.O. BOX 890, BLUEFIELD, VA	MCDOWELL	ECKMAN RAMP	17.00	32	46-04259
0-147-83	CONSOLIDATION COAL CO.	BLUEFIELD VA	MCDOWELL		267.55	31	46-02785
0-164-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MCDOWELL	PAGETON PREP PLANT	190.00	31	46-02273
0-3-81	CONSOLIDATION COAL CO.	PO BOX 1289, BLUEFIELD, VA	MCDOWELL		7.00	38	
0-90-83	CONSOLIDATION COAL CO.	PO BOX 1289, BLUEFIELD, VA	MCDOWELL	PAGETON HAUL ROAD	63.00	32	
S-33-82	CONSOLIDATION COAL CO.	POBOX 1289 BLUEFIELD VA 24605	MCDOWELL		46.00	10	
S-72-82	CONSOLIDATION COAL CO.	POBOX 1289 BLUEFIELD VA 24605	MCDOWELL		1200.00	10	
U-12-84	CONSOLIDATION COAL CO.	29 COLLEGE AVE., BLUEFIELD, VA	MCDOWELL		6.85	20	
U-198-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD WV 24605	MCDOWELL		30.00	20	
U-209-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MCDOWELL	AMONATE MINE #31	22.00	20	46-04421
U-221-83	CONSOLIDATION COAL CO.	BLUEFIELD VA	MCDOWELL	NO. 6 & NO. 7	13.00	20	46-01412
U-233-83	CONSOLIDATION COAL CO.	PO BOX 890, BLUEFIELD, VA	MCDOWELL		57.98	20	
U-270-83	CONSOLIDATION COAL CO.		MCDOWELL		22.00	20	
UO-61	CONSOLIDATION COAL CO.		MCDOWELL		17.84	20	46-05194
0-136-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MERCER		313.10	31	
0-7-82	CONSOLIDATION COAL CO.	BOX 1289, BLUEFIELD, VA 24605	MERCER		15.80	35	
U-217-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MERCER	CRANE CREEK NO. 6	39.83	20	46-01586
UO-577	CONSOLIDATION COAL CO.	BOX 1289, BLUEFIELD, VA	MERCER	CRANE CREEK NO. 12	17.05	20	46-05942
UO-692	CONSOLIDATION COAL CO.	BOX 1289, BLUEFIELD, VA	MERCER	CRANE CREEK NO. 9	12.07	20	46-05941
142-78	CONSOLIDATION COAL CO.	RT 1 BOX 169 BECKLEY WV 25801	RALEIGH	ROWLAND MINE	483.40	10	46-02036
0-40-81	CONSOLIDATION COAL CO.	RT 1, BOX 169, BECKLEY, WV	RALEIGH	ROWLAND MINE NO. 14	25.20	20	46-05626
0-125-83	CONSOLIDATION COAL CO.	RT 1 BOX 169 BECKLEY WV 25801	RALEIGH	ROWLAND MINE	244.83	31	46-03[illegible]91
U-83-83	CONSOLIDATION COAL CO.	RT 1 BOX 169 BECKLEY WV 25801	RALEIGH		60.44	20	46-043[illegible]0
U-88-83	CONSOLIDATION COAL CO.	RT 1 BOX 169 BECKLEY WV 25801	RALEIGH		91.77	20	
UO-130	CONSOLIDATION COAL CO.		RALEIGH	ROWLAND NO. 11 MINE	38.71	20	46-05325
UO-440	CONSOLIDATION COAL CO.	RT 1, BOX 169, BECKLEY, WV	RALEIGH		0.70	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
O-11-84	CONSOLIDATION COAL CO.	29 COLLEGE AVE., BLUEFIELD, VA	WYOMING		235.80	20	
U-208-83	CONSOLIDATION COAL CO.	29 COLLEGE AVE. BLUEFIELD VA	WYOMING	BUCKEYE NOSEMAN	3.80	20	46-01546
UO-584	CONSOLIDATION COAL CO.	PO BOX 1289, BLUEFIELD, VA	WYOMING		11.44	20	
S-4009-86	CONSOLIDATION COAL CO.		MCDOWELL		105.00	10	
O-150-83	CONSOLIDATION COAL CO.	BOX 1289 BLUEFIELD VA 24605	MCDOWELL		251.61	38	
U-4027-86	CONSOLIDATION COAL CO.		MCDOWELL	BLACKWOLFE MINE	4.90	20	
U-4015-86	CONSOLIDATION COAL CO.		MCDOWELL		25.10	20	
UO-471	CONSOLIDATION COAL CO.	PO BOX 1289, BLUEFIELD, VA	WYOMING	WESTIGAN	4.02	20	46-05201
I-539	CONSOLIDATION COAL CO.	P.O. BOX 1314, MORGANTOWN, WV	MONONGALIA	BOOTHS TIPPLE	6.90	34	46-03326
UO-225	CONSOLIDATION COAL CO.	450 RACETRACK RD, WASHINGTO,PA	MARSHALL		3.60	20	
UO-721	CONSOLIDATION COAL CO.	450 RACETRACK RD, WASHINGTO,PA	MARSHALL		1.00	20	
U-214-83	CONSOLIDATION COAL COMPANY	BOX 1289, BLUEFIELD, VA 24605	MCDOWELL		310.00	20	
U-3024-89	CONSOLIDATION COAL COMPANY	RT 1 BOX 169 BECKLEY WV 25801	RALEIGH	ROWLAND NO 6 MINE	39.00	20	
U-4021-89	CONSOLIDATION COAL COMPANY	P.O. BOX 1289 BLUEFIELD WV 24605	MCDOWELL	BIG CREEK NO 1	10.00		
UO-433	CONTINENTAL-COAL	DRAWER 608, BUCKHANNON, WV	LEWIS		8.40	20	
O-3034 86	COOPER COAL, INC.	PO BOX 143 CRAIGSVILLE WV	NICHOLAS	COAL LOADOUT #1	1.10	34	
118-80	COPEN COAL CO.	BOX 151, BURNSVILLE, WV	BRAXTON	GODFREY	28.83	10	46-05159
44-80	COPEN COAL CO.	BOX 151, BURNSVILLE, WV	BRAXTON	SUB STA	11.00	10	46-05159
U-4036-86	CORAL ENTERPRIZES, INC.	PO BOX 87, IAEGER, WV 24844	WYOMING	MINE NO. 2	3.60	20	
S-98-85	COTTLE COAL CO.		NICHOLAS		50.00	10	
63-79	COURAGE MINING CO.	BOX 7, DANTE, VA 24237	CLAY	SURFACE NO. 1	103.00	10	
213-77	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER	SOUTH FORK STRIP	126.50	10	46-02302
51-76	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER	SUGARTREE MT. TOP	390.00	10	46-04528
O-34-82	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER		18.70	20	
O-33-81	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER		9.30	20	
O-34-81	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER	BLIZZARD RUN MINE	5.20	20	
O-35-81	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER		10.00	20	
68-77	COURAGE MINING CO.	RT 2, BOX 165, NETTIE, WV 26681	GREENBRIER		124.00	10	
O-36-81	COURAGE MINING COMPANY	P.O. BOX 433, SUMMERSVILLE,WV 26681	GREENBRIER		12.90	20	
R-3022-87	COWACO, INC.	878 SHERWOOD RD, CHARLESTON,WV	CLAY	TAYLOR CREEK REFUSE PILE	129.80	33	
S-3070-88	CRADDOCK & SONS COAL CO IN	700 DRY HILL RD., BECKLEY, WV 25801	FAYETTE	SUNDAY ROAD STRIP #1	44.00	10	
S-68-83	CRADDOCK AND SON COAL CO.	PO BOX 87, SUMMERSVILLE, WV	NICHOLAS	SURFACE	94.00	10	46-06692
S-27-83	CRANE COAL CO.	RT 1, BOX 125, ALBRIGHT, WV	PRESTON	STRIP NO. 1	8.00	10	46-05751
S-6011-88	CRAVAT COAL COMPANY	37900 CADIZ-PIEDMONT RD CADIZ OHIO	CLAY	CLAY COUNTY #1 MINE	68.30	10	
H-300	CRIMSON PROCESSING CO INC.	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA		25.00	32	
H-228	CRIMSON PROCESSING CO INC.	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA		9.00	32	
R-752	CRIMSON PROCESSING CO.INC.	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA		150.00	33	46-03085
U-179-83	CRIMSON PROCESSING CO.INC.	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA	NORTON MINE COMPLEX	144.55	20	46-05391
U-5035-87	CUB BRANCH DEVELOPMENT CO.	P.O. BOX 892, CEREDO, WV 25507	MINGO	DEEP MINE #1	24.00	20	
S-5034-87	CUB BRANCH DEVELOPMENT CO.	P.O. BOX 892, CEREDO, WV 25507	MINGO	SURFACE MINE #1	92.79	10	
O-51-83	CUMBERLAND VILLAGE MINING	PO BOX 365, MATEWAN, WV	MINGO		1.40	38	
UO-666	CUMBERLAND VILLAGE MINING	PO BOX 365, MATEWAN, WV	MINGO	ALMA NO. 1	16.92	20	46-06620
I-675	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE		0.92	34	46-06561
I-686	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE		3.00	34	
O-25-81	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE		17.93	20	
EM-84	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE		3.20	20	
H-667	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE	MAIN HR AND REFUSE	10.93	32	12-11WV4-
I-708	CYPRUS KANAWHA CORPORATION	POBOX 550 MONTGOMERY WV 25136	FAYETTE		0.95	34	
UO-570	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE		11.58	20	
EM-82	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	KANAWHA	STOCKTON NO. 1	2.87	20	46-04267
EM-83	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON, WV 25139	KANAWHA		6.70	20	46-04828
O-47-85	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE	KATIE PREP PLANT	10.50	31	46-05145
O-48-85	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON, WV 25139	FAYETTE		10.00	33	
S-3019-86	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE	HUFFMAN NO. 1	116.50	10	46-07058
S-3043-87	CYPRUS KANAWHA CORPORATION	PO BOX 570, MONTGOMERY, WV	FAYETTE	BILL LOCKE SURFACE	119.39	10	46-07058

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
O-3045-07	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE	CHILTON MINE NO. 1	13.00	20	
S-3064-07	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	KANAWHA	UPPER SPLIT 05 BLOCK AUGE	102.39	10	
S-3065-07	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139 0	KANAWHA	NO. 8 TSM	199.50	10	46-0604
O-3088-07	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON WV 25139	FAYETTE	RIGHT FORK HAULROD	27.63	32	
S-3031-08	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON, WV 25139	FAYETTE	HUFFMAN SURFACE MINE	32.83	10	
S-3067-08	CYPRUS KANAWHA CORPORATION	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE	TOLBERT MINE NO. 3	173.40	10	
S-3041-09	CYPRUS KANAWHA CORPORATION	PO BOX 130 MOUNT CARBON WV 25139	FAYETTE	EAGLE AND NO2 GAS SURFACE	264.10	10	
S-6020-09	CYPRUS KANAWHA CORPORATION	PO BOX 130 MT CARBON, WV 25139	FAYETTE/KA	SYCAMORE SOUTH	610.41		
O-6022-09	CYPRUS KANAWHA CORPORATION	PO BOX 130, MT CARBON, WV 25139	FAT/KAN	SYCAMORE NOORTH HAULROAD	92.00		
21-81	CYPRUS KANAWHA CORPORATION	P.O. BOX 130, MT CARBON, WV 25139	KANAWHA		44.00	10	
UO-516	D & K COAL CO.	BOX 303, BIRCH RIVER, WV	BRAXTON		8.72	20	46-0712
157-73	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL	STRIP NO. 1	37.00	10	46-0240
44-79	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL	STRIP NO. 1	97.60	10	46-0240
59-80	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL	STRIP NO. 1	61.00	10	46-0240
96-74	D & L COAL CO.		MINERAL	STRIP NO. 1	92.10	10	46-0240
H-292	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL		1.15	32	
I-593	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL	BERYL TIPPLE	3.40	34	46-0240
I-598	D & L COAL CO.	RT 4 BOX 395 KEYSER WV 26726	MINERAL	OAKMONT TIPPLE	5.90	34	46-0240
S-34-84	D & L COAL CO.	RT 4, BOX 395, KEYSER, WV	MINERAL	JONES STILLENBARGER	97.00	10	46-0240
S-80-85	D & L COAL CO.		MINERAL		23.00	10	46-0240
S-2033-86	D & L COAL CO., INC.		MINERAL	OAKMONT-FREEPORT	71.80	10	46-0240
S-2001-88	D & L COAL CO., INC.	ROUTE 4, BOX 395, KEYSER, WV 26726	MINERAL	"GREEN" MINE	112.80	10	
S-2007-88	D & L COAL CO., INC.	ROUTE 4, BOX 395, KEYSER, WV 26726	MINERAL	JONES-STULLENBARGER #2	72.00	10	
S-2013-89	D & L COAL COMPANY INC	ROUTE 4 BOX 395 KEYSER WV 26726	MINERAL	MORRIS/DIXON MINE	24.00	10	46-0240
S-59-80	D & L COAL COMPANY, INC.	RT 4, BOX 395, KEYSER, WV	MINERAL		61.00	10	
S-29-74	D & L COAL COMPANY, INC.	RT 4 BOX 395 KEYSER,WV 26726	MINERAL		92.19	10	
U-177-83	D.D. & L. COAL CO., INC.	P.O. BOX 87, IAEGER, WV 24844	WYOMING	RU-MAE DON NO. 1	10.00	20	46-0714
O-72-82	DAL-TEX COAL	PO BOX D, SHARPLES, WV 25183	LOGAN	BUFFALO NO. 6	10.00	20	46-0657
U-192-83	DAL-TEX COAL	BOX D SHARPLES WV 25183	LOGAN	COALBURG NO. 3	3.53	20	
O-71-82	DAL-TEX COAL	PO BOX D, SHARPLES, WV 25183	LOGAN	STOCKTON NO. 1	9.00	20	46-0651
EM-10	DAL-TEX COAL	PO BOX D, SHARPLES, WV	LOGAN	MARILIN MINE	12.00	20	46-04
H-374	DAL-TEX COAL	P O BOX D SHARPLES WV 25183	LOGAN		24.00	32	
H-626	DAL-TEX COAL	POBOX D SHARPLES WV 25183	LOGAN	LEFT FK HAULROAD	25.30	32	46-0714
H-695	DAL-TEX COAL	POBOX D SHARPLES WV 25183	LOGAN		13.00	32	
I-634	DAL-TEX COAL	POBOX D SHARPLES WV 25183	LOGAN		22.50	34	
O-118-83	DAL-TEX COAL	BOX D, SHARPLFS, WV 25183	LOGAN		8.00	32	
P-729	DAL-TEX COAL	POBOX D SHARPLES WV 25183	LOGAN		186.00	31	
R-616	DAL-TEX COAL	POBOX D SHARPLES WV 25183	LOGAN		14.47	33	
UD-555	DAL-TEX COAL	BOX D, SHARPLES, WV 25183	LOGAN	ROBIN NO. 2	43.50	20	46-0477
O-51-85	DAL-TEX COAL		LOGAN	MONCLO REFUSE AREA	292.00	33	46-0313
S-5019-86	DAL-TEX COAL CORP.		LOGAN	BLOSSOM BRANCH STRIP	53.00	10	46-0694
S-5024-86	DAL-TEX COAL CORP.		LOGAN	ROCKHOUSE MINE	1606.20	10	46-0675
U-5005-86	DAL-TEX COAL CORP.		LOGAN	SENG CAMP NO. 1 MINE	24.50	20	
S-5052-86	DAL-TEX COAL CORP.		LOGAN	BEE BAIT MINE	161.46	10	
U-5088-86	DAL-TEX COAL CORP.	PO BOX D SHARPLES, WV 25183	LOGAN	BEE BAIT DEV.	22.00	20	
U-5087-86	DAL-TEX COAL CORP.	PO BOX D SHARPLES, WV 25183	LOGAN	BEE BAIT DEV.	9.00	20	
O-5089-86	DAL-TEX COAL CORP.	PO BOX D SHRPLES, WV 25183	LOGAN	BEE BAIT DEV.	10.00	32	
U-5106-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	BEND BRANCH DEVELOPMENT	42.30	20	
U-5107-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	BEND BRANCH DEVELOPMENT	12.50	20	
U-5108-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	BEND BRANCH DEVELOPMENT	31.00	20	46-047
O-5105-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	BEND BRANCH DEVELOPMENT	12.44	32	
S-5101-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	LICK BRANCH MINE	638.00	10	
O-5095-86	DAL-TEX COAL CORP.	PO BOX D, SHARPLES, WV 25183	LOGAN	BEECH CREEK HAULROAD	10.00	32	
S-5081-87	DAL-TEX COAL CORPORATION	P.O. BOC D, SHARPLES, WV 25183	LOGAN	RENEGADE MINE	1117.00	10	46-0694
U-5015-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	COALBURG NO. 7 MINE	4.10	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
S-5011-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	WOLFPEN MINE	254.00	10	
S-5016-88	DAL-TEX COAL CORPORATION	P.O. BOX 3, SHARPLES, WV 25183	LOGAN	BLOSSOM BRANCH DEVELOPMENT	89.73	10	
S-5017-88	DAL-TEX COAL CORPORATION	P.O. BOX 3, SHARPLES, WV 25183	LOGAN	BLOSSOM BRANCH DEVELOPMENT	36.44	10	
O-5018-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	BLOSSOM BRANCH DEVELOPMENT	9.32	32	
U-5019-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	BLOSSOM BRANCH DEVELOPMENT	8.04	20	
U-5020-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	BLOSSOM BRANCH DEVELOPMENT	18.71	20	
U-5087-88	DAL-TEX COAL CORPORATION	P.O. BOX D, SHARPLES, WV 25183	LOGAN	BUFFALO NO. 9 MINE	4.60	20	
U-5048-89	DAL-TEX COAL CORPORATION	PO BOX D SHARPLES WV 25183	LOGAN	BUFFALO NO 10	8.00	20	
U-120-82	DANDY, JIM COALS	PO BOX 329, BUCKHANNON, WV	LEWIS		9.47	20	
U-81-84	DARBET	GEN DEL, JOLO, WV	MCDOWELL		2.30	20	
40-73	DAUGHERITY COAL CO.	TERRA ALTA, WV 26764	PRESTON		70.00	10	
188-75	DAUGHTERY COAL CO.		PRESTON	STRIP NO. 1	54.00	10	46-01487
U-26-85	DAVIDSON MINING		BOONE		15.00	20	
S-24-83	DEAN FUELS	PO BOX 235, MAIDSVILLE, WV	MONONGALIA	STRIP NO. 1	15.00	10	46-67431
U-160-82	DEAN FUELS	PO BOX 235, MAIDSVILLE, WV	MONONGALIA	DEAN NO. 1	7.00	20	46-06607
U-147-82	DECONDOR COAL CO.	BOX 8AA, MASONTOWN, WV	PRESTON		4.00	20	
U-1080-86	DECONDOR COAL COMPANY	RT . 1, BOX 18, MASTONTOWN, WV 26542	PRESTON	SQUIRES CREEK NO. 3 DEEP	13.00	20	
O-49-83	DEHUE COAL CO.	PO BOX 338, MADISON, WV	LOGAN	PREP PLANT FACILITY	14.33	31	46-09266
O-54-83	DEHUE COAL CO.	PO BOX 338, MADISON, WV	LOGAN		76.56	38	
U-180-83	DEHUE COAL CO.	BOX 308 MADISON WV 25130	LOGAN		5.88	20	
U-182-83	DEHUE COAL CO.	BOX 308 MADISON WV 25130	LOGAN	DABNEY PORTAL	11.56	20	46-01397
U-62-83	DEHUE COAL CO	PO BOX 338, MADISON, WV	LOGAN		6.15	20	
U-63-83	DEHUE COAL CO.	PO BOX 338, MADISON, WV	LOGAN		6.60	20	
O-5062-87	DEHUE COAL COMPANY	P.O. BOX 476, LYBURN, WV 25632	LOGAN	SLURRY INJECTION SITES	12.89	38	
O-2024-86	DELTA COAL SALES, INC.	DELTA COAL SALES, INC.	WEBSTER	KESSLER TIPPLE	12.00	35	
S-2007-86	DELTA MINING, INC.		WEBSTER		34.00	10	46-07119
S-1039-86	DELTA MINING, INC.		PRESTON		41.00	10	46-07119
U-2024-87	DELTA MINING, INC.	P.O. BOX 307, GRANTSVILLE, MD	UPSHUR	MARY LYNN NO. 1 DEEP MINE	10.92	20	
U-116-82	DELTA TERMINALS, INC.		BOONE		11.70	20	
54-81	DELTA TERMINALS, INC.		BOONE	HEWITT SURFACE	230.00	10	46-05830
98-60	DELTA TERMINALS, INC.		BOONE	HEWITT NO. 51	244.00	10	46-05830
00-658	DELTA TERMINALS, INC.		BOONE		8.00	20	
U-33-82	DELTA TERMINALS, INC.		KANAWHA		10.00	20	
O-29-84	DELTA TERMINALS, INC.		BOONE		21.30	32	
U-137-83	DEMOTTE PEERLESS	808 GORMAN AVE., ELKINS, WV	RANDOLPH		6.20	20	
54-71	DESROSIER BROTHERS	BOX 365 MADISON, WV 25130	WEBSTER		300.00	10	
NONE	DEXCAR QUEEN COAL		UPSHUR		2.50	33	46-02693
EM-67	DIAMOND ENERGY	PO BOX 840, HOLDEN, WV	LOGAN		4.00	20	
U-2029-87	DIAMOND J. MINING, INC.	P.O. BOX 236, SUMMERSVILLE, WV	WEBSTER	MINE 02	8.00	20	
I-663	DIPPEL & DIPPEL COAL CO.	23 WEST ST. WESTOVER WV 26505	MONONGALIA		2.40	34	
S-1065-86	DIPPLE & DIPPLE COAL CO.		MONONGALIA	BLANEY & COX	12.00	10	
O-31-84	DONALDSON MINE CO.		KANAWHA		127.00	33	
O-33-85	DONALDSON MINE CO.		KANAWHA		51.10	30	WV40079-(
U-6022-86	DONALDSON MINE CO.		KANAWHA	DMC NO. 19 MINE	22.70	20	
O-6004-87	DONALDSON MINE COMPANY	DRAWER S, CEDAR GROVE, WV	KANAWHA	BIG HOLLOW SLURRY IMPOUND	283.00	33	
O-523	DONALDSON MINING CO.	DRAWER S CEDAR GROVE WV 25039	KANAWHA		116.17	33	
S-5011-89	DONNAWAY COALS, INC.	BOX 506 JUSTICE WV 24851	MINGO	SURFACE MINE 01	30.00	10	
S-3055-88	DOUBLE M MINING COMPANY IN	PO BOX 299, RUPERT, WV 25984	GREENBRIER	NO. 5 STRIP	81.00	10	46-07132
U-4001-86	DOUGLAS POCAHONTAS COAL CO		MCDOWELL	PATTON MINE	5.20	20	
I-650	DREAMLAND, LIMITED	BOX 12 DANESE WV 25831	FAYETTE		9.00	34	
138-70	DRENNEN ENTERPRISES, INC.	PO BOX 1760 PRINCETON WV 24740	GREENBRIER	LOTS FLAT STRIP	300.40	10	
S-3032-86	DRENNEN ENTERPRISES, INC.		GREENBRIER		289.10	10	46-06895
139-70	DRENNEN ENTERPRISES, INC.	P.O. BOX 1760, PRINCETON, WV 24740	GREENBRIER		268.00	10	46-07376
U-3061-87	DRENNEN ENTERPRISES, INC.	PO BOX 1760, PRINCETON, WV	GREENBRIER	DRENNEN DEEP MINE NO. 1	10.00	20	
I-494	DRENNEN TIPPLE	BOX 305 MADISON WV 25130	NICHOLAS		9.50	34	46-05957

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
U-4027-88	DRY FORK COAL COMPANY	RT. 3, BOX 142, TAZEWELL, VA 24651	MCDOWELL	NO. 1 MINE	7.42	20	
U-13-84	DRY HILL COAL CO.		FAYETTE		4.00	20	
U-14-84	DRY HILL COAL CO.		FAYETTE		8.00	20	
U-155-82	E & H MINING & TRUCKING	BOX 976, S. TAZEWELL, VA	WYOMING	MINE NO 1	2.20	20	46-0462
U-156-82	E & S COAL CO.	P O BOX 157 SHINNSTON WV 26431	HARRISON		0.50	20	
S-31-85	E & S COAL COMPANY		HARRISON		10.00	10	
00-342	E&A COAL CO., INC.	KOPPERS BLDG., PITTS., PA	RALEIGH		6.33	20	
U-1029-86	E. & S. COAL CO.		HARRISON	E & S TIPPLE	2.00	30	46-0687
S-3041-87	E. J. & L. COMPANY, INC.	302 BEAVER AVE., BECKLEY, WV	RALEIGH	01 STRIP	50.00	10	
S-2017-89	E.F.A. INCORPORATED	R: 6 BX 21, WEBSTER SPRNGS WV 25288	WEBSTER	POINT MOUNTAIN SURFACE MIN	22.00	10	
U-5065-86	EAGLE DELTA COAL CORP.		LOGAN	OLD MINE NO. 4	4.00	20	46-0718
U-29-84	EAGLE ENERGY	PO BOX 102, MATEWAN, WV	MINGO		15.00	20	
U-200-83	EAGLE ENERGY	PO BOX 102, MATEWAN, WV 25678	MINGO		5.00	20	
U-5091-87	EAGLE HAWK CARBON CO., INC	P.O. BOX 2700, GRUNDY, VA	MINGO	MINE NO. 2	7.50	20	
U-5042-87	EAGLE HAWK CARBON, INC.	PO BOX 1700, GRUNDY, VA	MINGO	MINE NO. 1	4.00	20	
U-5095-87	EAGLE HAWK CARBON, INC.	P.O. BOX 2700, GRUNDY, VA	MINGO	MINE NO. 5	10.50	20	46-0053
U-5094-87	EAGLE HAWK CARBON, INC.	P.O. BOX 2700, GRUNDY, VA	MINGO	MINE NO. 3	9.00	20	
U-5037-88	EAGLE HAWK CARBON, INC.	P.O. BOX 2700, GRUNDY, VA 24614	MINGO	MINE NO. 4	10.07	20	
U-5059-89	EAGLEHAWK CARBON, INC.	P.O. BOX 379, RED JACKET WV 25692	MINGO	MINE NO 6A & 6B	5.00	20	
O-6006-89	EAST BANK DOCK CO LTD	P.O. BOX 8 BURNWELL WV 25034	KANAWHA	EAST BANK DOCK	3.00		
O-23-85	EAST GULF FUEL		RALEIGH		5.20	32	
07-80	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTSBURGH PA 15222	BOONE	COLONY BAY MINE	160.00	10	46-0627
O-131-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		2.93	20	
O-134-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		4.37	20	
O-135-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE	HERNSHAW NO. 4	3.57	20	
O-136-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		3.19	20	
O-24-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE		2.35	20	
O-25-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		2.55	20	
O-3-81	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		2.50	20	
O-3-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE		1.90	20	
O-46-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	HERNSHAW 4P	1.70	20	46-0652
O-6-81	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., WV	BOONE	WINIFREDE 6P	3.62	20	46-0641
O-7-81	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		1.85	20	
O-8-81	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS, PA	BOONE		2.10	20	
O-84-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	EALLE NO. 2	4.80	20	46-0661
H-453	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		9.10	32	
H-474	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		2.00	32	
H-534	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		21.00	32	
H-607	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE	JASPER WORKMAN ROAD	14.90	32	46-0450
O-13-83	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE	BIG LICK REFUSE AREA	95.90	33	46-0313
O-165-83	EAST. ASSOC. COAL CO.		BOONE		61.10	31	
O-17-82	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE	HERNSHAW 4 P	18.10	32	46-06524
O-20-83	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		9.90	31	
O-36-83	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS PA 15222	BOONE		14.90	30	
O-39-82	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		1.00	35	
O-4-83	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE	WELLS REFUSE DUMP	136.80	33	46-0529
O-62-82	EAST. ASSOC. COAL CO.		BOONE		32.30	32	
O-72-82	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		53.90	31	
O-74-82	EAST. ASSOC. COAL CO.	KOPPERS BLDG PITTS PA 15219	BOONE	KOPPERSTON AND PLANT	19.20	31	46-01536
O-8-82	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		7.00	34	
O-9-82	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE		3.90	32	
U-123-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		4.70	20	
U-143-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURG, PA	BOONE		22.40	20	
U-144-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURG, PA	BOONE	LIGHTROOT NUMBER 1	13.30	20	46-04332
U-149-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	HARRIS NO 2	58.20	20	46-01270

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
U-150-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	LIGHTFOOT NO. 2	0.70	20	46-04955
U-150-82	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	WERNSHAW NO. 6 P MINE	6.70	20	46-03083
U-20-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE		51.54	20	
U-23-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		11.60	20	
U-25-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		4.42	20	
U-43-83	EAST. ASSOC. COAL CO.		BOONE		5.40	20	
U-48-83	EAST. ASSOC. COAL CO.		BOONE		11.06	20	
U-49-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		3.00	20	
U-66-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., WV	BOONE		4.93	20	
U-79-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE	WHORTON NO. 11	20.30	20	46-04500
U-89-83	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE		32.00	20	
U-93-83	EAST. ASSOC. COAL CO.		BOONE		3.49	20	
U-94-83	EAST. ASSOC. COAL CO.		BOONE		3.04	20	
UO-513	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTSBURGH PA	BOONE		5.00	20	
UO-514	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTSBURGH PA	BOONE	WINIFREDE NO 2P	3.20	20	46-06171
UO-553	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTSBURGH, PA	BOONE	WERNSHAW 2 P	2.90	20	46-01809
UO-554	EAST. ASSOC. COAL CO.	1 PPG PLACE, PITTS., PA	BOONE	WERNSHAW 3P MINE	3.00	20	
UO-596	EAST. ASSOC. COAL CO.		BOONE	CAMPBELLS CREEK 1	6.00	20	
O-6-83	EAST. ASSOC. COAL CO.	1 PPG PLACE PITTS. PA 15222	BOONE	WHARTON REFUSE DISPO	123.60	33	46-03136
119-77	EAST. ASSOC. COAL CO.		WYOMING		605.00	10	46-05093
D-30-82	EAST. ASSOC. COAL CO.		RALEIGH		1.10	20	
O-1-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG PITTS PA 15219	RALEIGH		24.00	31	
O-2-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG PITTS PA 15219	RALEIGH	KEYSTONE NO 4 REFUSE	129.00	33	46-02870
D-30-82	EAST. ASSOC. COAL CO.		RALEIGH		1.12	36	
U-24-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG., PITTS., PA	RALEIGH	KEYSTONE NUMBER 4	5.00	20	46-01490
U-47-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG., PITTSBURG, PA	RALEIGH	KOPPERSTON NO 1 MINE	50.00	20	46-03157
UO-693	EAST. ASSOC. COAL CO.	KOPPERS BLDG., PITTSBURGH, WV	RALEIGH	CAMPBELL CREEK NO. 3P	4.72	20	46-06350
H-309	EAST. ASSOC. COAL CO.	DRAWER V BECKLEY WV 25801	WYOMING		65.00	32	
O-19-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG PITTS PA 15219	WYOMING	MILL BRANCH REFUSE	252.00	33	46-03157
O-68-83	EAST. ASSOC. COAL CO.	CONTRACT MINE BARRETT WV 25013	WYOMING		7.27	30	
O-81-82	EAST. ASSOC. COAL CO.	KOPPERS BLDG PITTS PA 15219	WYOMING		24.40	31	
U-51-83	EAST. ASSOC. COAL CO.	KOPPERS BLDG., PITTSBURG, PA	WYOMING	KOPPERSTON NUMBER 2	62.90	20	46-01536
UO-617	EAST. ASSOC. COAL CO.	KOPPERS BLDG, PITTSBURG, PA	WYOMING		2.16	20	
U-6012-88	EAST. ENERGY INVESTMNT INC	P.O. BOX 487, CEDAR GROVE, WV 25039	BOONE	WELCH BRANCH NO. 1	5.35	20	
D-73-82	EAST. GULF FUEL CO.	41 EAGLES RD, BECKLEY, WV	RALEIGH		7.30	20	
194-76	EASTERN ASSOC COAL CORP	800 LAIDLEY TWR CHARLESTON WV 25324	BOONE	CRAZY NO. 1	80.00	10	46-05220
203-76	EASTERN ASSOC COAL CORP	800 LAIDLEY TOWER CHARLESTON WV 253	BOONE	CRAZY NO. 1	337.76	10	46-05220
U-5013-86	EASTERN ASSOC. COAL CO.		BOONE		6.00	20	
U-5069-86	EASTERN ASSOC. COAL CO.		BOONE	WERNSHAW 12-P & 13-P	9.60	20	46-07441
O-5091-86	EASTERN ASSOC. COAL CO.	PO BOX 69004, CHARLESTON, WV	BOONE	ROCKLICK	67.55	10	
S-5020-86	EASTERN ASSOC. COAL CORP.		BOONE		188.70	10	1211WV40
O-5006-86	EASTERN ASSOC. COAL CORP.		BOONE	ROCKLICK HAULROAD	38.00	32	46-07441
U-1-83	EASTERN ASSOC. COAL CORP.	800 LAIDLEY TWR, CHARLESTON,WV	BOONE		5.50	20	
UO-515	EASTERN ASSOCIATED	1 PPG PLACE, PITTSBURGH, PA	BOONE	WERNSHAW 1P	4.00	20	46-09937
UO-298	EASTERN ASSOCIATED		BOONE	KOPPERTONE #1	1.20	20	
U-73-85	EASTERN ASSOCIATED COAL		BOONE	WERNSHAW 14-P MINE	19.50	20	
O-24-83	EASTERN ASSOCIATED COAL	KOPPERS BLDG. PITTS. PA 15219	MARION	FEDERAL #1 PREP. PLANT	31.80	31	46-01429
U-2-83	EASTERN ASSOCIATED COAL	KOPPERS BLDG., PITTSBURGH, PA	MARION	FEDERAL #1	30.00	20	
O-124-83	EASTERN ASSOCIATED COAL	KOPPERS BLDG., PITTS., PA	MONONGALIA	FEDERAL #2 PREP. PLANT	41.00	31	
O-23-83	EASTERN ASSOCIATED COAL	P.O.BOX 1233, CHARLESTON, WV	MONONGALIA	FEDERAL #2 REFUSE	106.70	33	
O-25-83	EASTERN ASSOCIATED COAL	KOPPERS BLDG. PITTS. PA 15219	MONONGALIA	FEDERAL #1 AMD	11.00	36	
U-19-83	EASTERN ASSOCIATED COAL	1 PPG PLACE, PITTSBURG, PA	MONONGALIA	FEDERAL #2	78.45	20	46-01429
O-1010-86	EASTERN ASSOCIATED COAL		MONONGALIA		121.90	30	
90-75	EASTERN ASSOCIATED COAL CO	800 LAIDLEY TWR CHARLESTON WV 25324	BOONE	CRAZY NO. 1	85.00	10	46-05220
91-75	EASTERN ASSOCIATED COAL CO	800 LAIDLEY TWR CHARLESTON WV 25324	BOONE	CRAZY NO. 1	138.00	10	46-05220

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
S-53-85	EASTERN ASSOCIATED COAL CO	800 LAIDLEY TWR CHARLESTON WV 25324	BOONE		1470.00	10	46-052
U-5010-86	EASTERN ASSOCIATED COAL CO	800 LAIDLEY TWR CHARLESTON WV 25324	BOONE	MINE NO'S 4,5,6	25.00	20	
U-4041-86	EASTERN ENERGY CORP.	GEN. DEL., MAXIE, VA 24628	MCDOWELL	MINE NO. 3	8.04	20	
U-4010-87	EASTERN ENERGY CORP.	GEN. DE., MAXIE, VIRGINIA	MCDOWELL	MINE NO. 4	7.37	20	46-0573
U-4014-88	EASTERN ENERGY CORPORATION	GENERAL DELIVERY, MAXIE, VA 24628	MCDOWELL	NO. 6	5.18	20	
S-6029-86	EASTERN ENERGY INVESTMENTS	PO BOX 487 CEDAR GROVE, WV	KANAWHA	PINCH STRIP	297.00	10	
U-6030-86	EASTERN ENERGY INVESTMENTS	P.O. BOX 487, CEDAR GROVE, WV 25039	KANAWHA	PINCH STRIP	10.00	20	
S-6021-88	EASTERN ENERGY INVESTMENTS	PO BOX 487 CEDAR GROVE WV 25039	CLAY	LICK BRANCH COMPLEX	101.34	10	
UO-551	EASTERN MINGO COAL CO.	PO BOX 119, NAUGATUCK, WV	MINGO		25.00	20	
UO-646	EASTERN MINGO COAL CO.	PO BOX 119, NAUGATUCK, WV	MINGO		57.00	20	46-0578
U-1002-89	EASTERN MOUNTAIN MINING CO	114 W HIGH ST., KINGWOOD, WV 26537	PRESTON	DEEP MINE #2	8.00	20	
U-50-83	ECONOMY FUEL		WYOMING		3.60	20	
S-10-81	EDGE DEVELOPMENT CO.	POBOX 3100 MORGANTOWN WV 26505	MONONGALIA		64.00	10	46-0586
S-46-81	EDGE DEVELOPMENT CO.	PO BOX 3100, MORGANTOWN, WV	MONONGALIA	ROSEDALE NO. 4	51.28	10	46-0586
S-85-84	ED-E DEVELOPMENT CO.		MONONGALIA		71.00	10	
S-1032-86	ED-E DEVELOPMENT CO., INC.		PRESTON	BARLOW	80.00	10	
S-1041-89	EDWARD E. THOMPSON	616 LOUISE AVE MORGANTOWN WV 26505	MONONGALIA	SANETRIK SURFACE MINE	26.00		
U-76-83	ELECTROMET FUELS	PO BOX 1080, MORGANTOWN, WV	MONONGALIA	POKEY #3	7.90	20	
11-81	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER	PARDEE & CURTAIN	81.00	10	46-0650
43-80	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER	FORKRIDGE	66.00	10	46-0617
70-81	ELK RIVER SEWELL	BERGOO WV 26298	WEBSTER	FISHER RUN	71.44	10	46-0650
N-500	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER		8.00	32	
N-577	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER		22.00	32	
O-127-83	ELK RIVER SEWELL	BOX 81, BERGOO, WV 26298	WEBSTER	REFUSE AREA	32.03	31	
UO-522	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER		11.36	20	
UO-586	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER		7.00	20	
UO-690	ELK RIVER SEWELL	BERGOO, WV 26298	WEBSTER		5.00	20	
U-2048-88	ELK RIVER SEWELL	PO BOX 81 BERGOO, WV 26298	WEBSTER		10.00	20	
S-108-85	ELK RIVER SEWELL COAL		WEBSTER		36.80	10	
R-2010-89	ELK RIVER SEWELL COAL CO	PO BOX 81 BERGOO WV 26298	WEBSTER	FISHER RUN REFUSE RECOVERY	6.00	33	
U-2015-86	ELK RIVER SEWELL COAL CO.		WEBSTER	MUDLICK RUN DEEP MINE	6.30	20	
U-2023-86	ELK RIVER SEWELL COAL CO.		WEBSTER	EASY RUN NO. 1 DEEP MINE	9.90	20	
U-2037-86	ELK RIVER SEWELL COAL CO.		WEBSTER	EASY RUN NO. 2 DEEP MINE	11.30	20	
S-2046-86	ELK RIVER SEWELL COAL CO.	PO BOX 81 BERGOO WV 26298	WEBSTER	RED OAK NO. 1 SURFACE MIN	102.23	10	
S-2006-87	ELK RIVER SEWELL COAL CO.	PO BOX 81, BERGOO, WV 26298	WEBSTER	BLAZED FORK SURFACE MINE	52.69	10	
S-2011-88	ELK RIVER SEWELL COAL CO.	BOX 81, BERGOO, WV 26298	WEBSTER	RED OAK NO. 3	84.89	10	
R-2027-88	ELK RIVER SEWELL COAL CO.	P.O. BOX 81, BERGOO, WV 26298	WEBSTER	BERGOO REFUSE AREA	17.68	33	
R-2039-88	ELK RIVER SEWELL COAL CO.	P.O. BOX 81, BERGOO, WV 26298	WEBSTER	BAKER RIDGE REFUSE AREA	15.95	33	
S-2046-88	ELK RIVER SEWELL COAL CO.	P.O. BOX 81, BERGOO, WV 26298	WEBSTER	BAKERS RIDGE NO. 1	103.00	10	
U-2047-88	ELK RIVER SEWELL COAL CO.	P.O. BOX 81, BERGOO, WV 26298	WEBSTER	BAKER RIDGE DEEP MINE #1	10.00	20	
U-2046-88	ELK RIVER SEWELL COAL CO.	P.O. BOX 81, BERGOO, WV 26298	WEBSTER	BAKER RIDGE DEEP MINE #2	10.00	20	
C-1-82	ELK RUN COAL CO.	PO BOX 497, SYLVESTER, WV	BOONE		33.68	20	
D-21-82	ELK RUN COAL CO.	PO BOX 497, SYLVESTER, WV	BOONE	CASTLE AND BLACK KIN	50.00	20	46-06242
N-557	ELK RUN COAL CO.	POBOX 479 SYLVESTER WV 25193	BOONE		98.00	32	
P-470	ELK RUN COAL CO.	POBOX 497 SYLVESTER WV 25193	BOONE	CHESS PROCESSING CO.	80.00	31	46-06180
UO-549	ELK RUN COAL CO.	PO BOX 497, SYLVESTER, WV	BOONE		2.80	20	
S-6006-87	ELK RUN COAL CO., INC.	BOX 497, SYLVESTER, WV 25913	BOONE	CHECKMATE SURFACE MINE	59.70	10	
S-6014-87	ELK RUN COAL CO., INC.	BOX 497, SYLVESTER, WV 25193	BOONE	BLACK CASTLE SURFACE MINE	239.00	10	
S-6026-88	ELK RUN COAL COMPANY	BOX 497, SYLVESTER, WV 25193	BOONE	BLACK CASTLE SURFACE NO. 2	322.73	10	46-07161
U-6007-87	ELK RUN COAL COMPANY	BOX 497 SYLVESTER,WV 25913	BOONE	BLACK BISHOP,BLACK KING	20.41	20	
S-6011-89	ELK RUN COAL COMPANY	BOX 497 SYLVESTER WV 25193	BOONE	BLACK CASTLE SURFACE #3	189.55	10	
U-6007-89	ELK RUN COAL COMPANY	BOX 497 SYLVESTER WV 25193	BOONE	CASTLE #2 DEEP MINE	2.92	20	
UO-397	ELK RUN COAL COMPANY INC	PO BOX 497, SYLVESTER, WV 25193	BOONE		9.20	20	
UO-662	ELK RUN COAL COMPANY INC	PO BOX 497, SYLVESTER, WV 25193	BOONE		16.00	20	
O-8-81	ELK RUN MINING	POBOX 479 SYLVESTER WV 25193	BOONE		113.80	33	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA 1
UO-663	ELK RUN MINING	PO BOX 497, SYLVESTER, WV	BOONE		18.00	20	
UO-681	ELK RUN MINING	PO BOX 497, SYLVESTER, WV	BOONE		18.50	20	
0-85-82	ELKAY MINING CO.	LYBURN, WV 25632	BOONE	WADE PLANT	9.50	31	46-02562
256-75	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN	WADE NO. 3	200.00	10	46-04344
258-76	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN	SURFACE NO. 1	200.00	10	
U-11-81	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN	HUFF CREEK #1	10.30	20	
D-138-82	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		4.79	20	
EM-124	ELKAY MINING CO.	GEN. DEL., LYBURN, WV 25632	LOGAN		7.93	20	
EM-134	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		16.00	20	
H-710	ELKAY MINING CO.	LYBURN WV 25632	LOGAN	FREEZE FORK ROAD	18.00	32	
H-712	ELKAY MINING CO.	LYBURN WV 25632	LOGAN		35.00	32	
0-50-82	ELKAY MINING CO.	GEN. DEL. LYBURN WV 25632	LOGAN	PREP PLANT NO. 1	24.50	31	46 01379
0-7-81	ELKAY MINING CO.	LYBURN WV 25632	LOGAN	HUFF CREEK HAULROAD	39.10	32	46-05628
0-70-83	ELKAY MINING CO.	GEN. DEL., LYBURN, WV 25632	LOGAN		6.50	38	
P-718	ELKAY MINING CO.	LYBURN WV 25632	LOGAN		32.00	31	
R-749	ELKAY MINING CO.	LYBURN WV 25632	LOGAN	TINSLEY BRANCH RDA	150.00	33	
U-213-83	ELKAY MINING CO.	GEN. DEL., LYBURN, WV 25632	LOGAN		10.95	20	
UO-319	ELKAY MINING CO.	GEN. DEL., LYBURN, WV 25632	LOGAN	NO. 1	5.05	20	46-01379
UO-601	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		77.00	20	
UO-616	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		42.59	20	46-05628
0-33-84	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN	NO 3 ACCESS	4.62	38	46-05628
S-99-85	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		66.40	10	
S-5090-86	ELKAY MINING CO.	LYBURN, WV 25632	LOGAN		113.00	10	
U-206-83	ELLER INCORPORATED	PO BOX 2277, BECKLEY, WV 25802	NICHOLAS		13.50	20	
172-78	ELLISON COAL CO.	BOX 1131, WEBSTER SPRINGS, WV	WEBSTER		71.20	10	
S-117-85	ELM COAL CORP.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		64.50	10	
UO-340	ELMINA COAL CO.	BOX 622, TAZEWELL, VA	MCDOWELL		6.08	20	46-05905
U-4012-86	ELMINA COAL CO.		MCDOWELL	ELMINA COAL CO.	18.35	20	46-06894
0-2014-87	ENERGY RESOURCE MGNT SVC	RT 12 BOX 245 MORGANTOWN WV 26505	BARBOUR	MEADOWVILLE #3	21.00	34	
S-2021-86	ENOXY COAL. INC.		UPSHUR		507.00	10	46-04775
U-31-84	ENOXY COALS	BOX 309, RAGLAND, WV 25670	MINGO		5.75	20	
0-79-83	ENVIRO ENERGY		RANDOLPH	YOKUM RUN CONVEYOR SYSTEM	1.10	32	
UO-700	ENVIRO ENERGY	PO BOX 27, DURBIN, WV	RANDOLPH	ENVIRO NO. 6	24.00	20	46-06372
S-67-85	EPLING COAL ENTERPRISES		NICHOLAS		55.00	10	
U-1077-86	ERIC EXCAVATING & TRUCKING		MONONGALIA	ERIC #1 MINE	10.00	20	
0-5-82	ERLON COAL CO.		FAYETTE		8.00	20	
U-5006-89	ETHEL COALS, INC.	P.O. BOX 120, LOGAN, WV 25601	LOGAN	MINE #1	10.00	20	
S-60-85	EVE COAL CO.		LOGAN		110.00	10	
D-10-81	F & A COAL COMAPNY INC.	620 FLORENCE ST. MULLENS WV 25882	RALEIGH		12.00	20	
H-25	F & F MINING CO.	PO BOX 96, EAST BANK, WV	FAYETTE		20.00	32	
H-376	F & F MINING CO.		FAYETTE		8.00	32	
S-57-84	F & M COAL CO		PRESTON		95.50	10	46-04275
P-596	F & M COAL CO	601 E MAIN ST, KINGWOOD, WV	PRESTON		16.00	31	
D-113-82	F & M COAL CO	601 E. MAIN ST., KINGWOOD, WV 26537	PRESTON		7.00	20	
S-1026-87	F & M COAL CO	601 EAST MAIN ST., KINGWOOD, WV	PRESTON		167.00	10	
S-1044-87	F & M COAL CO	601 E. MAIN ST., KINGWOOD, WV	PRESTON		96.50	10	46-02891
S-1006-88	F & M COAL CO	601 EAST MAIN ST., KINGWOOD, WV	PRESTON	HERRING JOB	95.00	10	
U-1026-88	F & M COAL CO	601 EAST MAIN ST., KINGWOOD, WV	PRESTON	SOUTH PRESTON #1 MINE	58.00	20	
46-79	F & M COAL CO.	BOX 757 KINGWOOD WV 26537	PRESTON	NO. 50	130.00	10	46-04145
S-1073-86	F & M COAL CO.	601 EAST MAIN ST. KINGWOOD,WV 26537	PRESTON		72.00	10	46-02871
44-78	F & M COAL CO.	601 EAST MAIN ST.KINGWOOD WV 26537	PRESTON	BOLINGER	70.00	10	46-03726
111-79	F.M.C.	PO BOX 8127, SO. CHAS., WV	BOONE		125.00	10	
P-693	F.M.C.	PO BOX 8127, SO. CHAS., WV	BOONE	BLACK PEARL PREP PLANT	40.00	31	46-06034
136-74	FAIRFAX TRUCKING	PO BOX 230, ELKINS, WV	RANDOLPH	SUSAN	66.00	10	46-02670
17-74	FAIRFAX TRUCKING	PO BOX 230, ELKINS, WV	RANDOLPH	SUSAN CHARLOTTE	77.00	10	46-02670

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
226-75	FAIRFAX TRUCKING	POBOX 230 EKLINS WV 26241	RANDOLPH	SUSAN CHARLOTTE	42.00	10	46-02670
N-279	FAIRFAX TRUCKING	PO BOX 230 ELKINS WV 26241	RANDOLPH		18.00	32	
0-126-83	FAIRFAX TRUCKING	POBOX 230 ELKINS WV 26241	RANDOLPH	SUSAN CHARLOTTE	3.33	34	
U-61-83	FAITH MINING CO.	BOX 1090, OCEANA, WV 24870	WYOMING		3.40	20	
S-44-83	FALCO COAL CO.		TAYLOR	THOMAS STRIP	19.00	10	46-06567
U-92-83	FARLEY MINERALS & RECLAMA.	RT 3, BOX 3404, CHAPMANVILL,WV	LOGAN	NO. 1	2.01	20	46-06027
50-80	FARMERS CONST. CO.	RT 1, BOX 10, SHINNSTON, WV	HARRISON	BLUE GRASS	12.50	10	46-06091
D-61-82	FAT CREEK COAL CO	609 JONES AVE., OAK HILL, WV	RALEIGH		5.70	20	
0-3053-87	FAYETTE DOCK, INC.	PO BOX 359, FAYETTEVILLE, WV	FAYETTE	FAYETTE DOCK LOADOUT #1	11.00	34	
U-120-83	FAYETTE ENERGY	PO BOX 91, DANVILLE, WV	FAYETTE		27.00	20	
U-2027-87	FERM-LEE MINING, INC.	P.O. BOX 155, GLENVILLE, WV	BRAXTON	CARMEN T #1	10.00	20	
S-41-85	FIELDS CREEK COAL COMPANY	13905 MACCKORKLE AVE., CHEASAPEAKE,	KANAWHA	NO 50	249.70	10	46-05962
S-6013-86	FIELDS CREEK COAL COMPANY	13905 MACCORKLE AVE CHESAPEAKE, WV	KANAWHA	#50 MINE - AREA "B" ADD.	73.52	10	
U-3016-86	FIESTA MINING, INC.	800 N SIDE DR., SUMMERSVILLE, WV	NICHOLAS	BIG SPRUCE #1	15.00	20	
UO-78	FIRECREEK FUEL		RALEIGH	NONE	4.00	20	46-05440
U-24-85	FIRST BIG MOUNTAIN MINING		KANAWHA	MINE #2	17.90	20	46-06801
U-6005-86	FIRST BIG MOUNTAIN MINING		KANAWHA	MINE NO. 3	10.00	20	
U-6017-88	FIRST BIG MTN. MINING CO.	DRAWER L, CEDAR GROVE, WV 25039	KANAWHA	BIG MOUNTAIN NO. 5 MINE	7.35	20	
S-3018-89	FITZPATRICK INDUSTRIES	BOX 66 LAYLAND WV 25864	FAYETTE	MINE #1	20.00	10	
S-1022-89	FIVE BROTHERS CONST CO INC	RT. 1, BOX 19, MORGANTOWN, WV 26505	MONONGALIA	HAYHURST SITE	14.53	10	
U-15-85	FLEX ENTERPRIZES, INC.	P.O. BOX 799, DELBARTON, WV	MINGO		9.70	20	
U-7-85	FLEX ENTERPRIZES, INC.	P.O. BOX 779, DELBARTON, WV	MINGO		10.00	31	
U-16-85	FLEX ENTERPRIZES, INC.	P.O. BOX 799, DELBARTON, WV	MINGO	NO. 3	5.10	20	46-04269
15-80	FORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	MILBURN CREEK STRIP	36.00	10	46-04330
72-79	FORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	SURFACE NO. 4	75.00	10	46-04230
S-129-82	FORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA		65.00	10	
U-94-84	FORD COAL CO.		KANAWHA		30.00	20	
32-80	FORD COAL CO.	BOX 175 HANSFORD WV 25103	NICHOLAS	SURFACE NO. 2	209.00	10	46-03839
58-79	FORD COAL CO.	BOX 175 HANSFORD WV 25103	NICHOLAS	SURFACE NO. 2	81.00	10	46-03839
S-56-83	FORD COAL CO.	PO BOX 173, HANSFORD, WV	NICHOLAS	SURFACE NO. 2	66.00	10	46-03839
1-636	FOREMAN LOSE MINING CO.		PRESTON	MINE #1	2.00	36	46-05307
UO-37	FOREMAN LOSE MINING CO.		PRESTON		9.80	20	46-06307
S-43-84	FORMAN, LOYAL G. & SON.	RT 2, BOX 234, ALBRIGHT, WV	PRESTON		16.00	10	
68-80	FORTNEY, WAYNE H.		MONONGALIA	FORTNEY	21.00	10	
S-5104-86	FREEMAN BRANCH MINING	PO BOX 20911, COLUMBUS, OH	LOGAN	SO. HILL LOGAN CNTY ARPRT	132.00	10	
68-79	FREEMAN BRANCH MINING CO.	GEN DEL SKYGUSTY WV	MCDOWELL	FREEMAN BRANCH	180.00	10	46-05741
S-112-85	FREMONT COAL		MINGO		185.00	10	
S-94-85	FREMONT COAL		MINGO		79.00	10	
D-96-82	FREMONT COAL CO.	RT 1, BOX 261, DELBARTON, WV	MINGO		19.00	20	
D-97-82	FREMONT COAL CO.	RT 1 BOX 261, DELBARTON, WV	MINGO		7.00	20	
0-24-82	FREMONT COAL CO.	RT 1 BOX 261 DELBARTON WV	MINGO		3.00	32	
S-71-82	FREMONT COAL CO.	PO BOX 191, ALTA VISTA, VA	MINGO		73.00	10	
0-42-82	FREMONT COAL CO.	STAR RT 3, LAMBRIC, KY	MINGO		47.00	32	
U-5038-86	FREMONT COAL CO., INC.	STAR RT. 3, BOX LAMBRIC, KY 41340	MINGO	MINE NOS. CB-7 AND CB-8	6.00	20	
0-25-82	FREMONT COAL COMPANY	RT 1, BOX 261, DELBARTON, WV	MINGO		5.00	34	
S-1027-87	FRESA CONSTR. CO., INC.	PO BOX 187, BRIDGEPORT, WV	HARRISON	JACK RUN STRIP	25.30	10	46-04095
U-1026-89	FRESA CONSTRUCTION CO	PO BOX 187 BRIDGEPORT WV 26330	HARRISON	SMITH RUN DEEPMINE	10.00	20	
S-1036-88	FRESA CONSTRUCTION CO INC	P.O. BOX 187, BRIDGEPORT, WV 26330	HARRISON	LANDFILL STRIP MINE	36.00	10	
0-1041-87	FRESA CONSTRUCTION CO INC	PO BOX 187, BRIDGEPORT, WV 26330	HARRISON	FRESA TIPPLE	7.53	34	
S-2-84	FRESA CONSTRUCTION CO.	PO BOX 187, BRIDGEPORT, WV	HARRISON		37.00	10	
S-1043-89	FRESA CONSTRUCTION COMPANY	PO BOX 187, BRIDGEPORT WV 26330	HARRISON	PK STRIP	65.77	10	
S-1052-86	FRUSH ENTERPRISES, INC.	P.O. BOX 1353, BRIDGEPORT, WV 26330	HARRISON		40.00	10	46-06114
S-1008-89	FRUSH ENTERPRISES, INC.	PO BOX 1353 BRIDGEPORT WV 26330	HARRISON	DOUGLAS RUN MINE	47.50	10	
S-1018-87	G & B COAL, INC.	PO BOX 190 FARMINGTON, PA 15437	PRESTON	LISTON MINE	55.00	10	
S-86-83	G & L COAL CO.	PO DRAWER S, BRADLEY, WV	RALEIGH		35.00	10	46-06636

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
S-3035-87	G & L COAL CO.	DRAWER S, BRADLEY, WV 25810	FAYETTE	FALLS CK #2 SURFACE MINE	81.00	10	
U-3036-87	G & L COAL CO.	DRAWER S, BRADLEY, WV 25810	FAYETTE	FALLS CK #1 DEEP MINE	17.47	20	
S-4-84	G & M COALS	PO BOX 66, LAYLAND, WV	FAYETTE	SURFACE NC. 1	87.00	10	46-06441
S-43-83	G & M COALS	POBOX 66 LAYLAND WV 25864	FAYETTE	SURFACE NO. 2	36.00	10	46-0669-
S-3086-86	G & M COALS, INC.	PO BOX 66, LAYLAND, WV 25864	FAYETTE	BACKUS MOUNTAIN STRIP	87.94	10	
S-36-83	G & W EQUIP. & LEASING	PO BOX 304 BRADLEY WV 25810	NICHOLAS	SUMMERSVILLE STRIP	105.00	10	46-06460
S-37-83	G & W EQUIP. & LEASING	PO BOX 304 BRADLEY WV 25810	NICHOLAS	SUMMERSVILLE STRIP	15.00	10	46-06460
S-54-81	G & W EQUIP. & LEASING	BOX 304 BRADLEY WV 25810	NICHOLAS		94.00	10	46-06460
S-70-84	G & W EQUIP. & LEASING	BOX 359, FAYETTEVILLE, WV	NICHOLAS	SUMMERSVILLE STRIP	35.00	10	46-06460
S-19-85	G & W EQUIP. & LEASING	BOX 359, FAYETTEVILLE, WV	NICHOLAS		98.00	10	
S-3-85	G & W EQUIP. & LEASING	PO BOX 359, FAYETTEVILLE, WV	NICHOLAS		32.00	10	
U-34-84	G & W EQUIP. & LEASING	PO BOX 359, FAYETTEVILLE, WV	NICHOLAS		17.00	20	
S-13-85	G & W EQUIPMENT LEASING	P.O. BOX 359, FAYETTEVILLE, WV	NICHOLAS	SPRUCE RUN	38.00	10	46-06992
0-18-83	G & W EQUIPMENT LEASING	PO BOX 359, FAYETTEVILLE, WV	NICHOLAS		6.00	32	
78-78	G & W EQUIPMENT LEASING	915 MAIN ST. SUMMERSVILLE WV	NICHOLAS	NO. 4	71.00	10	46-04467
S-47-85	G & W EQUIPMENT LEASING		NICHOLAS	#1 SURFACE MINE	90.00	10	46-06460
S-76-85	G & W EQUIPMENT LEASING		NICHOLAS		114.00	10	
S-3008-86	G & W EQUIPMENT LEASING		NICHOLAS	TIOGA STRIP	31.00	10	46-06875
S-3083-86	G & W EQUIPMENT LEASING	P. O. BOX 359, FAYETTEVILLE WV	NICHOLAS	BIG SPRUCE #1	74.00	10	
S-3006-89	G & W EQUIPMENT LEASING	RT. 2, BOX 698 FAYETTEVILLE, WV	NICHOLAS	SPRUCE RUN #2	122.79	10	
41-78	GALLO COAL CO.	BOX 31, REYNOLDSVILLE, WV	HARRISON		10.00	10	46-04351
U-141-83	GARLAND COAL SALES INC	BOX 207, AVONDALE, WV 24811	MCDOWELL	NO. 2	9.97	20	
U-58-84	GARY COAL SALES, INC.	P.O. BOX 218, PREMIER, WV	MCDOWELL	NO. 4 MINE AND REFUSE	58.00	20	46-01413
U-4022-87	GARY COAL SALES, INC.	P.O. BOX 198, PREMIER, WV 24878	MCDOWELL		12.69	20	
U-4023-87	GARY COAL SALES, INC.	—PO BOX 198 PREMIER, WV 24878	MCDOWELL		10.27		
U-61-84	GARY ENTERPRISES, INC.	GEN. DEL., GARY, WV	MCDOWELL	NO. 2	59.55	20	46-01419
0-43-84	GAULEY COAL SALES CO.	PO BOX 207, SUMMERSVILLE, WV	NICHOLAS		15.30	33	46-03937
S-1034-88	GB COAL COMPANY	P.O. BOX 313, SMITHFIELD, PA 15478	MONONGALIA	BORTZ MINE	12.00	10	
U-5096-88	GEMSTONE COAL CORPORATION	PO BOX 179, CYCLONE, WV 24827	LOGAN	TURKEYPEN DEEP MINE NO. 3	10.00	20	
0-9-81	GILBERT IMPORTED HARDWOOD	PO DRAWER D GILBERT WV 25621	MINGO	NO. 2 PREP PLANT	80.00	31	46-03231
S-5020-87	GLEN ALUM MINING CO.	BOX 63, WHARNCLIFFE, WV	MINGO	#1 SURFACE MINE	12.00	10	
U-5021-87	GLEN ALUM MINING CO.	BOX 63, WHARNCLIFFE, WV	MINGO	#1 & #1 A DEEP MINES	19.00	20	
S-5029-88	GLEN ALUM MINING COMPANY	BOX 63, WHARNCLIFFE, WV 25651	MINGO	NO. 2 SURFACE MINE	60.23	10	
U-5030-88	GLEN ALUM MINING COMPANY	BOX 63, WHARNCLIFFE, WV 25651	MINGO	NO. 2, 3, 4, & 5 DEEP MINE	10.00	20	
NONE	GLORY COAL CO.		HARRISON	COMPASS TIPPLE	5.00	34	
NONE	GLORY COAL CO.		HARRISON	LAUREL RUN AMD	4.00	33	
NONE	GLORY COAL CO.		HARRISON	MARRS TIPPLE	0.00	34	
UO-675	GLX DEVELOPMENT CORP.	PO BOX 44 WINIFREDE WV 25214	KANAWHA		12.41	20	
S-17-84	GOLDEN DECADE COAL CO.	RT 2, BOX 60, CEDAR BLUFF, VA	MCDOWELL	BIG BLUE AUGER	23.80	10	46-06768
S-1009-88	GOLDEN PRODUCTS COMPANY	RT. 13, BOX 428, MORGANTOWN, WV	MONONGALIA	SITE 1	27.36	10	46-07624
I-733	GOULD MINES	BOX 685, RAINELLE, WV	GREENBRIER		10.00	34	
S-31-82	GOULD MINES	PO BOX 685, RAINELLE, WV	GREENBRIER	SURFACE NO. 1	70.00	10	46-05861
S-65-85	GOULD MINES		GREENBRIER		128.90	10	46-06874
0-3017-86	GOULD MINES, INC.	PO BOX 685 RAINELLE WV 25962	GRECNORIER	HAULROAD	52.20	32	
U-3006-86	GOULD MINES., INC.		GREENBRIER	COZY KNOOK	17.40	20	
I-692	GRACIE, INC	P.O. BOX 1156 BECKLEY WV 25802	NICHOLAS		12.00	34	
S-3058-88	GRACIE, INCORPORATED	PO BOX 1126 BECKLEY WV 25802-1126	NICHOLAS	MCMILLION CREEK SURFACE #1	19.00	10	
S-3051-86	GRAFTON COAL CO.		NICHOLAS	BIRCH NO. 1	46.00	10	
S-3021-87	GRAFTON COAL CO.	PO BOX 2150, CLARKSBURG, WV	NICHOLAS	BIRCH NO. 2	74.00	10	46-07097
NONE	GRAFTON COAL CO.		?NICHOLAS?	TIPPLE/MUWAY	0.00	34	
S-54-82	GRAFTON COAL CO.	PO BOX 670, WESTON, WV	LEWIS	LAUREL LICK NO. 2	70.50	10	46 04497
UO-414	GRAFTON COAL CO.	PO BOX 2150, CLARKSBURG, WV	LEWIS		14.00	20	46-06C93
P-602	GRAFTON COAL COMPANY	PO BOX 670, WESTON, WV 26452	LEWIS	PREP. PLANT	20.00	31	
S-3042-88	GRAFTON COAL COMPANY	P.O. BOX 2150, CLARKSBURG, WV 26302	WEBSTER	BIRCH NO. 3	81.00	10	
S-3034-89	GRAFTON COAL COMPANY	P.O. BOX 2150 CLARKSBURG WV 26302	NICHOLAS	MAHONING NO 1	80.83	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
S-3055-89	GRAFTON COAL COMPANY	P.O. BOX 2150 CLARKSBURG WV 26302	WEBSTER	BIRCH NO 5	88.00		
S-76-83	GRAFTON MINING CO.	PO BOX 2150, CLARKSBURG, WV	HARRISON	BUFFLO NO. 1	145.00	10	46-024
S-41-83	GRAFTON MINING CO.		LEWIS		78.00	10	46-024
S-48-84	GRAFTON MINING CO.	PO BOX 670, WESTON, WV	LEWIS		100.00	10	46-0[illegible]4
S-78-84	GRAFTON MINING CO.	PO BOX 2150, CLARKSBURG, WV	LEWIS		50.00	10	
S-80-82	GRAFTON MINING CO.	PO BOX 670, WESTON, WV 26452	LEWIS	KINCHELO NO. 3	65.00	10	46-0245
S-21-85	GRAFTON MINING COMPANY		HARRISON		38.50	10	
S-5074-86	GRAHAM COAL CO., INC.	RT. 3, PO BOX 514, WISE, VA	LOGAN	STRIP NO. 1	83.90	10	46-0730
S-5038-87	GRAHAM COAL CO., INC.	RT 3, BOX 514, WISE, VA	LOGAN	SURFACE MINE NO. 2	59.40	10	
U-5047-87	GRAHAM COAL CO., INC.	RT 3, PO BOX 514, WISE, VA	LOGAN	DEEP MINE NO. 1	7.60	20	
S-5005-88	GRAHAM COAL CO., INC.	RT 3, P.O. BOX 514, WISE, VA 24293	LOGAN	SURFACE MINE NO. 3	55.61	10	
S-34-83	GRAYBEAL'S INDIAN CREEK	PO BOX AR, BECKLEY, WV	WYOMING	COUNTY LINE	92.00	10	46-06[illegible]3
U-11-85	GREASY CREEK COAL CO., INC	BOX 352, TAZEWELLE, VA 24651	MCDOWELL		6.00	20	
136-78	GREAT MOUNTAIN COAL CO.	PO DRAWER 320, PAGE, WV	FAYETTE		74.00	10	46-0471
160-77	GREAT MOUNTAIN COAL CO.	PO DRAWER 320, PAGE, WV	FAYETTE		127.00	10	
H-295	GREAT MOUNTAIN COAL CO.	PO DRAWER 320, PAGE, WV	FAYETTE		12.00	32	
114-79	GREAT MOUNTAIN COAL CO.	PO DRAWER 320, PAGE, WV	FAYETTE		108.66	10	
U-3053-88	GREEN MOUNTAIN ENERGY INC	41 EAGLES ROAD, BECKLEY, WV 2580	RALEIGH	NO. 9 MINE	15.92	20	
U-154-83	GREEN MOUNTAIN ENERGY, INC	41 EAGLES ROAD BECKLEY WV 25801	RALEIGH	NO 2 MINE	13.60	20	46-0247
U-3052-89	GREEN MOUNTAIN ENERGY, INC	41 EAGLES ROAD BECKLEY WV 25801	WYOMING	NO 2 MINE	12.74	20	
56-80	GREEN RIVER MINING		HARRISON	RIGHIER NO. 1	64.00	10	46-061
S-61-84	GREEN, WALTER		PRESTON	REXROAD STRIP	75.90	10	
U-3078-87	GRINDSTONE MINING CORP.	P.O. BOX 210, FAYETTEVILLE, WV	FAYETTE	GRINDSTONE NO. 1 MINE	11.94	20	
UO-661	GRIZZLY MINING	HWY 41, BOX 1698, SUMMERSVI,WV	WEBSTER	(JULIANA MINING)	9.74	20	
U-3026-86	GRIZZLY MINING. INC.		NICHOLAS	MINE NO. 3	5.60	20	
S-74-84	GUTTA COALS		MONONGALIA	GUTTA MINE NO. 3	12.00	10	46-0619
S-5002-87	GUYAN LAND CORP. OF WV	110 NEW HAMPSHIRE DR., ASHL.KY	LOGAN	GUYAN #1	120.52	10	
S-5027-88	GUYAN LAND CORP. OF WV	110 NEW HAMPSHIRE DR., ASHLAND, KY	LOGAN	GUYAN #2	170.73	10	46-0731
U-69-85	H & D COAL		GREENBRIER	MINE NO. 1	10.00	20	
UO-55	H & D COAL		MCDOWELL	NO. 3	4.50	20	
S-3033-87	H & D COAL CO.	GEN DEL, CRAWLEY, WV 24931	GREENBRIER	H & D NO. 1 STRIP	10.00	10	
S-5018-89	H & D MINING CO., INC.	P.O. BOX 378, MT. GAY, WV 25637	LOGAN	SURFACE NO. 3	177.00	10	
UO-333	H & H COAL CO.		PRESTON		2.00	20	46-0586
S-5068-88	H & H COAL COMPANY	PO BOX 560, PENNINGTON GAP WV 24277	LOGAN	AUGER NO. 4	112.00	10	
UO-718	H & S COAL CO.	BOX 426, JAEGER, WV 24844	WYOMING		4.66	20	
U-4017-87	H.C. INDUSTRIES, INC.	1419 W. MAIN ST., PRINCETON WV	MCDOWELL	NO. 3 MINE	3.00	20	
U-3023-87	H.E.L. COALS, INC.	P.O. BOX 1700, BECKLEY, WV 25802	RALEIGH	DOUGLAS #1	10.00	20	
S-3024-87	H.E.L. COALS, INC.	P.O. BOX 1700, BECKLEY, WV 25802	RALEIGH		25.00	10	
U-3003-89	H.E.L. COALS, INC.	P.O. BOX 2027, BECKLEY, WV 25802	RALEIGH	DOUGLAS NO. 2 MINE	9.97	10	46-0768
0-70-82	H.W.&C. COALS		BARBOUR	NO. 1	6.40	20	46-0184
S-4015-88	H.W.P. COAL COMPANY, INC.	NDEX WVUNITS,MCCONAMEE, WV 24811	MCDOWELL	USE WVUNITS INDEX WVUNITS,	86.55	10	
0-18-81	HALFWAY	41 EAGLES RD, BECKLEY, WV	RALEIGH		4.41	20	
40-81	HALLELUJAH MINING, INC.	RT 7, BOX 346, FAIRMONT, WV	PRESTON	NO. 1 STRIP	55.00	10	46-0515
U-5060-87	HAMPDEN COAL CO., INC.	PO DRAWER M, GILBERT, WV	MINGO	NO. 1 LOADING FACILITY	51.60	20	
0-5013-88	HAMPDEN COAL CO., INC.	P.O. DRAWER M, GILBERT, WV 25621	MINGO	NO. 1 REFUSE FACILITY	54.00	31	46-0740
S-5034-89	HAMPDEN COAL COMPANY INC	DRAWER M GILBERT WV 25621	MINGO	SURFACE MINE NO 1	46.00	10	
U-5035-89	HAMPDEN COAL COMPANY INC	DRAWER M GILBERT WV 25621	MINGO	DEEP MINE NO 4	7.00	20	
U-5036-89	HAMPDEN COAL COMPANY INC	DRAWER M GILBERT WV 25621	MINGO	DEEP MINE NO 5	7.00	20	
U-3074-86	HAMRICK RUN COAL COMPANY	32 OAKFORD AVE., RICHWOOD, WV	GREENBRIER	MINE NO. 1	10.00	20	
S-27-85	HANSFORD COAL CO		KANAWHA		131.00	10	
S-8-81	HANSFORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA		112.00	10	
S-79	HANSFORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	SURFACE NO. 1	119.00	10	46-04[illegible]52
S-265	HANSFORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA		1.00	35	
S-479	HANSFORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA		1.00	35	
S-51-84	HANSFORD COAL CO.	PO BOX 175, HANSFORD, WV	KANAWHA	SURFACE NO. 1	91.00	10	46-04152

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA 1
S-85	HANSFORD COAL CO.	POBOX 175 HANSFORD WV 25103	KANAWHA		1.00	35	
S-18-84	HANSFORD COAL CO.	PO BOX 175, HANSFORD, WV	KANAWHA	SURFACE NO. 3	144.00	10	46-06752
S-3007-87	HANSFORD COAL COMPANY	PO BOX 175, HANSFORD, WV	RALEIGH		74.00	10	
S-3049-88	HANSFORD COAL COMPANY	P.O. BOX 175, HANSFORD, WV 25103	RALEIGH	HANSFORD NO.2 SURFACE MINE	44.00	10	
S-3073-88	HANSFORD COAL COMPANY	P.O. BOX 175, HANSFORD, WV 25312	RALEIGH	HANSFORD NO. 2 SURFACE	47.00	10	
U-5008-86	HAR-MAT COAL CO., INC.	BOX 217, MAIN ST., OAK HILL, WV	BOONE	ROACH BRANCH	5.94	20	
U-58-85	HAR-MAT COAL CO., INC.		BOONE	DRY BRANCK NO. 1	14.30	20	
UO-665	HAR-MAT COAL CO., INC.	BOX 217, MAIN ST., OAK HILL, WV	BOONE		4.24	20	
U-5018-87	HARLEY MINING, INC.	41 EAGLES RD, BECKLEY, WV	BOONE	HARLEY 1 & 2	36.60	20	46-07252
O-101-83	HARMONY COAL CO.	PO BOX 900, ROBINSON CRK, KY	MINGO	RAW COAL LOADOUT	1.86	34	
S-11-82	HARVEY ENERGY	114 HOUSTON ST BECKLEY WV 2580	FAYETTE		41.00	10	46-04181
S-28-82	HARVEY ENERGY	BOX 1662 BECKLEY WV 25801	FAYETTE		16.00	10	
S-33-81	HARVEY ENERGY	BOX 1662 BECKLEY WV 25801	FAYETTE		15.00	10	
S-35-81	HARVEY ENERGY	BOX 1662 BECKLEY WV 25801	FAYETTE		122.00	10	
S-59-82	HARVEY ENERGY	114 HOUSTON ST BECKLEY WV 2580	FAYETTE		22.30	10	
S-54-84	HARVEY ENERGY		FAYETTE		216.00	10	46-06446
S-3001-86	HARVEY ENERGY CORP.		FAYETTE	GARDEN GROUND #2	70.00	10	46-06486
S-3070-86	HARVEY ENERGY CORP.		FAYETTE		157.00	10	46-06587
S-3068-86	HARVEY ENERGY CORP.		FAYETTE	HICO NO. 1	52.00	10	
S-3079-86	HARVEY ENERGY CORP.	POBOX 1662 BECKLEY WV 25802	FAYETTE	SATURDAY ROAD #1	140.00	10	
S-3080-86	HARVEY ENERGY CORP.	POBOX 1662 BECKLEY WV 25802	FAYETTE	CLARK SURFACE MINE	60.00	10	
S-3081-87	HARVEY ENERGY CORP.	PO BOX 1662, BECKLEY, WV	FAYETTE		51.00	10	46-04181
S-3025-88	HARVEY ENERGY CORPORATION	P.O. BOX 1662, BECKLEY, WV 25802	FAYETTE	PACKS MOUNTAIN	96.00	10	
S-3030-89	HARVEY ENERGY CORPORATION	PO BOX 1662 BECKLEY WV 25802	FEYETTE	PACKS MOUNTAIN NO. 3	43.54	10	
O-6039-88	HATFIELD DOCK & TRANSFER	DRAWER E, MARMET, WV 25365	KANAWHA	QUINCY DOCK	23.00	34	46-07188
O-6018-87	HATFIELD DOCK AND TRANSFER	895 W MEHRING WY, CINCINNAT,OH	KANAWHA	HATFIELD DOCK & TRANSFER	3.70	34	
110-80	HAWKS NEST MINING CO.	DRAWER AR, BECKLEY, WV 25801	FAYETTE	KANAWHA & GAULEY	215.00	10	46-03434
H-631	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE		16.00	32	
H-632	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE		40.00	32	46-03434
O-14-81	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE		48.67	31	
O-36-84	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE	HARDWOOD RDA	214.85	38	46-03103
S-11-81	HAWKS NEST MINING CO.	DRAWER 14, BECKLEY, WV 25801	FAYETTE	HAREWOOD STRIP	302.00	10	46-03434
S-4-83	HAWKS NEST MINING CO.	DRAWER AR, BECKLEY, WV 25801	FAYETTE	HAREWOOD	179.00	10	46-03434
UO-517	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE		45.00	20	
UO-518	HAWKS NEST MINING CO.	P.O. BOX 570, MONTGOMERY, WV 25136	FAYETTE		31.00	20	
S-3034-87	HAWKS NEST MINING CO.	PO BOX 570, MONIGOMERY, WV	FAYETTE	PEERLESS NO. 1	40.00	10	46-07058
U-3044-87	HAWKS NEST MINING CO.	PO BOX 570, MONTGOMERY, WV	FAYETTE	CHILTON MINE NO. 1	10.00	20	
O-1-81	HAWKS NEST MINING COMPANY		KANAWHA	WITCHER PREP PLANT	47.50	38	46-06253
NONE	HAWLEY COAL MINING		MCDOWELL	WILLIAMS #98	10.00	34	NONE
UO-703	HAWLEY COAL MINING	DRAWER J, KEYSTONE, WV	RALEIGH	WILLIS BRANCH NO. 1	14.50	20	46-03779
U-4023-89	HAWLEY COAL MINING CORP.	41 EAGLES ROAD BECKLEY WV 25801	MCDOWELL	NO 1 MINE	9.51	20	
O-82-82	HAYHURST & HILL	RT 9, BOX 307, FAIRMONT, WV	PRESTON		16.53	20	
O-5022-88	HEARTLAND RESOURCES, INC.	BOX 800, WISE, VA 24293	LINCOLN	ROCKHOUSE HAULROAD	42.46	32	
S-5021-88	HEARTLAND RESOURCES, INC.	BOX 800, WISE, VA 24293	LOGAN	SURFACE MINE NO. 1	128.39	10	
UO-367	HELVETIA MINING CO.	PO BOX 2327, ELKINS, WV	RANDOLPH		9.82	20	
S-46-84	HENDERSON COAL CO.		GRANT		10.00	10	
46-81	HENDERSON COAL CO.		MONONGALIA	NO. 1	10.00	10	46-06239
S-63-85	HIGH POWER ENERGY		NICHOLAS		625.00	10	
S-51-85	HIGH POWER ENERGY		NICHOLAS		633.00	10	
S-3005-86	HIGH POWER ENERGY		NICHOLAS		345.00	10	
S-3087-87	HIGH POWER ENERGY	P.O. BOX 20911, COLUMBUS, OH 43220	NICHOLAS	AREAS U & T	221.00	10	
S-3080-88	HIGH POWER ENERGY	P.O. BOX 20911, COLUMBUS, OH 43220	NICHOLAS	AREA A2	161.00	10	
S-3020-89	HIGH POWER ENERGY	BOX 20911 COLUMBUS OHIO 43220	NICHOLAS	TWENTY MILE CREEK MINE 901	319.00	10	
81-77	HIGH SPUR COAL CO.		LOGAN	EXCEL NO 2	160.00	10	46-04344
UO-350	HILL ENTERPRISES	BOX 116, DIXIE, WV	NICHOLAS	DORSEY NO. 1	5.00	20	46-05896

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
UO-696	HILL ENTERPRISES	BOX 116, DIXIE, WV	NICHOLAS		3.00	20	
22-81	HILLTOP COAL CO.		PRESTON	OLAF SHAFFER	14.90	10	46-06315
S-1034-87	HOBAR MINING, INC.	RT 1, BOX 323, MASONTOWN, WV	PRESTON		116.00	10	
S-106-85	HOBET MINING		LOGAN/MING		142.00	10	46-02249
104-79	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE	BIG HORSE CREEK STRIP	45.00	10	46-04670
106-77	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE	HOBET NO. 21	640.00	10	46-04670
128-78	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE	HOBET NO. 21	1049.90	10	46-04670
D-19-81	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	BOONE		3.00	20	
D-21-81	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	BOONE	MINE NO. 3	4.00	20	46-04670
H-120	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE		32.00	32	
H-291	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE		50.00	32	
G-6-81	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE	SLURRY IMPOUNDMENT	100.00	33	
R-405	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	BOONE	SLIPPERY GUT RDA	26.00	33	46-04670
S-30-82	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	BOONE	FILL NUMBER 4	620.00	10	46-02197
UO-370	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	BOONE		10.00	20	
72-80	HOBET MINING & CONST. CO.	BOX 305, MADISON, WV	LOGAN	HOBET NO. 7	500.00	10	46-02249
I-514	HOBET MINING & CONST. CO.	P O BOX 305 MADISON WV 25130	LOGAN		20.50	34	
I 516	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	LOGAN		9.88	34	
0-13-81	HOBET MINING & CONST. CO.	P O BOX 305 MADISON WV 25130	LOGAN		85.00	33	
P-475	HOBET MINING & CONST. CO.	P O BOX 305 MADISON WV 25130	LOGAN		31.00	31	
P 495	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV 25130	LOGAN		50.98	31	
R-567	HOBET MINING & CONST. CO.	P O BOX 305 MADISON WV 25130	LOGAN		50.00	33	
0-153-83	HOBET MINING & CONST. CO.	PO BOX 305, MADISON, WV	MINGO		6.80	32	
S-69-83	HOBET MINING & CONST. CO.	BOX 305, MADISON, WV 25130	MINGO	HOBET NO. 7	50.00	10	46-02249
S-70-83	HOBET MINING & CONST. CO.	BOX 305, MADISON, WV 25130	MINGO		1190.00	10	
S-32-85	HOBET MINING & CONSTRUCT.	P.O. BOX 305, MADISON, WV	BOONE	BIG HORSE CREEK MINE	1470.10	10	46-04670
S-5062-86	HOBET MINING, INC.		LOGAN	TRACE FORK SURFACE MINE	535.00	10	
S-5060-88	HOBET MINING, INC.	P.O. BOX 305, MADISON, WV 25130	BOONE	BALLARD FORK SURFACE MINE	400.00	10	
S-5026-89	HOBET MINING, INC.	P.O. BOX 305 MADISON WV 25130	BOONE	STANLEY FORK SURFACE MINE	390.00		
42-80	HOBET TERMINALS		BOONE	PINNACLE BRANCH	107.00	10	46-05630
H-492	HOLLY GROVE		UPSHUR		27.50	32	
S-2012-89	HOPE COAL COMPANY	BOX 155 COWEN WEST VIRGINIA 26206	UPSHUR	THOMASON # 1 MINE	27.00	10	
U-35-84	HORSE CREEK, LTD		MCDOWELL		2.00	20	
D-45-81	HUFF INC.		LOGAN		4.30	20	
UO-674	HUFF, INC.		LOGAN		1.00	20	46-06424
0-6028-87	HUGHES CREEK, INC.	P.O. BOX 10, LONDON, WV 25226	KANAWHA	DOCK NO. 1	13.96	34	
UO-224	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL		11.00	20	
UO-289	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL	MINE 58	17.60	20	46-05752
UO-290	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL		3.30	20	
UO-311	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL	NUMBER 3 MINE	13.70	20	46-05981
UO-412	HULL COAL	RT HCR 60 BOX 12, IAEGER, WV	MCDOWELL	NO. 7	2.70	20	46-04169
UO-413	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL		10.60	20	
UO-144	HULL COAL	RT HCR 60, BOX 12, IAEGER, WV	WYOMING		4.90	20	46-05596
U-4026-89	IAEGER ENERGY, INC.	PO BOX 396, COALWOOD, WV 24824	MCDOWELL	MINE NO 1	7.57	20	
NONE	IMPERIAL		TAYLOR	TIPPLE	3.90	34	
UO-288	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV	FAYETTE	LICK BRANCH NO. 2	13.30	20	46-05833
D-95	IMPERIAL COLLIERY CO.		KANAWHA	MINE NUMBER 1	0.00	20	46-01343
H-589	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	KANAWHA		1.64	32	
0-157-83	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	KANAWHA		12.00	38	
0-158-83	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	KANAWHA	BURNWELL PREP PLANT	12.00	31	46-03195
0-159-83	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	KANAWHA		21.00	31	
0-160-83	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV	KANAWHA	ESKDALE REFUSE AREA	161.00	33	
U-215-83	IMPERIAL COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	KANAWHA		10.00	20	
UO-177	IMPERIAL COLLIERY CO.	BURNWELL, WV 25034	KANAWHA		6.50	20	
UO-387	IMPERIAL COLLIERY CO.	BURNWELL, WV 25034	KANAWHA	MINE NO. 14	17.11	20	46-01344

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
I-750	INDIAN COAL LAND CO.	114 HOUSTON ST BECKLEY WV 2580	FAYETTE	HAWLEY TIPPLE	1.80	34	46-04181
UO-167	INDIAN CREEK COAL CO.		WYOMING		1.00	20	
EM-58	INDIAN RIDGE COAL CO.	RT HCR, BOX 12, IAEGER, WV	WYOMING		1.00	20	
U-101-83	INDUSTRIAL ENERGY	POBOX 630 RUPERT WV 25984	NICHOLAS		14.00	20	
SMA2682OR	INTER-STATE LUMBER CO. INC		PRESTON		108.00	10	
18-78	INTERNATIONAL COAL CO.		GREENBRIER		132.00	10	
112-80	INTERSTATE LUMBER CO.	601 E. MAIN ST., KINGWOOD, WV	PRESTON		100.00	10	46-04275
176-77	INTERSTATE LUMBER CO.	601 E MAIN ST, KINGWOOD, WV	PRESTON	CRAINE SCH.	110.00	10	46-04275
5-81	INTERSTATE LUMBER CO.	601 E. MAIN ST., KINGWOOD, WV	PRESTON	HAZELTON - BURNSIDE	150.80	10	46-04275
52-78	INTERSTATE LUMBER CO.		PRESTON	HOWESVILLE	27.00	10	46-04275
S-39-82	INTERSTATE LUMBER CO.	601 E. MAIN ST., KINGWOOD, WV	PRESTON		31.20	10	
S-41-81	INTERSTATE LUMBER CO.	601 E MAIN ST., KINGWOOD, WV	PRESTON		14.50	10	46-06461
S-52-83	INTERSTATE LUMBER CO.	601 E MAIN ST, KINGWOOD, WV	PRESTON	ISL - HER	48.00	10	46-02475
S-96-82	INTERSTATE LUMBER CO.	601 E. MAIN ST., KINGWOOD, WV	PRESTON	ISL SHAFFER	25.00	10	46-04275
224-76	INTERSTATE LUMBER CO.,INC.	601 E.MAIN ST., KINGWOOD,WV 26537	PRESTON		17.00	10	46-04275
127-74	INTERSTATE LUMBER CO.,INC.	601 E.MAIN ST. KINGWOOD, WV 26537	PRESTON		100.00	10	46-04275
SMA-2682	INTERSTATE LUMBER CO.,INC.	601 E.MAIN STREET KINGWOOD WV 26537	PRESTON		108.00	10	46-04265
S-1-82	IROQUOIS COAL	BOX 49, AMHERSTDALE, WV	LOGAN		112.69	10	
S-2-85	ISLAND CREEK COAL	BOX 840, HOLDEN, WV	LOGAN		355.00	10	
H-537	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	BOONE		37.00	32	
0-26-82	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	BOONE		70.00	32	
U-229-83	ISLAND CREEK COAL	BOX 840, HOLDEN, WV	BOONE		5.60	20	
U-230-83	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	BOONE		5.60	20	
68-71	ISLAND CREEK COAL		GREENBRIER		5.90	10	
UO-212	ISLAND CREEK COAL	PO BOX 1275, PAINTSVILLE, KY	LOGAN		13.00	20	
UO-580	ISLAND CREEK COAL		LOGAN	1-D	13.00	20	46-06735
0-5-81	ISLAND CREEK COAL		LOGAN		6.50	20	
EM-57	ISLAND CREEK COAL	PO BOX 840, HOLDEN, WV	LOGAN	GUYAN 1C	13.21	20	46-03844
H-195	ISLAND CREEK COAL	PO BOX 840, HOLDEN, WV	LOGAN		5.00	32	
H-456	ISLAND CREEK COAL	P BOX 1275 PAINTSVILL KY 41204	LOGAN	ELK CREEK HAULROAD	50.67	32	46-01952
0-32-82	ISLAND CREEK COAL	PO BOX 1275 PAINTSVILLE KY 41240	LOGAN		2.40	34	
0-65-83	ISLAND CREEK COAL	P O BOX 1275 PAINTSVILLE KY	LOGAN		19.99	33	
P-590	ISLAND CREEK COAL	P BOX 1275 PAINTSVIL KY 41240	LOGAN	NO 10 PLANT & REFUSE	47.00	31	46-02444
P-610	ISLAND CREEK COAL	POBOX 840 HOLDEN WV 25625	LOGAN	GUYAN NO. 5	72.40	31	46-02443
U-130-83	ISLAND CREEK COAL	BOX 840 HOLDEN, WV 25625	LOGAN	MINE NO. 9	7.75	20	
U-167-83	ISLAND CREEK COAL		LOGAN		11.85	20	
UO-12	ISLAND CREEK COAL	BOX 840, HOLDEN, WV	LOGAN		6.00	20	
0-37-81	ISLAND CREEK COAL	ST RT BOX 207, MEADOR, WV	MINGO	NO. 1	3.50	20	46-06462
P-605	ISLAND CREEK COAL	BOX 840, HOLDEN, WV 25625	MINGO		50.00	31	
EM-78	ISLAND CREEK COAL	DRAWER 75, CRAIGSVILLE, WV	NICHOLAS	BIRCH 2A	62.50	20	46-01459
EM-79	ISLAND CREEK COAL	DRAWER 75, CRAIGSVILLE, WV	NICHOLAS	DONEGAN 10 A	13.50	20	46-02184
EM-80	ISLAND CREEK COAL	DRAWER 75, CRAIGSVILLE, WV	NICHOLAS		9.40	20	
H-33	ISLAND CREEK COAL	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		27.00	36	
0-43-82	ISLAND CREEK COAL	SRT 1, BX 48K, CRAIGSVILLE, WV	NICHOLAS	TIOGA PLANT	12.00	31	46-02185
P-656	ISLAND CREEK COAL	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS	DONEGAN NO 1	132.00	31	46-02183
P-657	ISLAND CREEK COAL	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		282.80	31	
P-664	ISLAND CREEK COAL	ST RT 1, BOX 48K, CRAIGSVIL,WV	NICHOLAS		102.00	31	46-02184
R-679	ISLAND CREEK COAL	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		104.80	33	
R-680	ISLAND CREEK COAL	DRAWER 75 CRAIGSVILLE WV 26205	NICHOLAS		302.00	33	
EM-65	ISLAND CREEK COAL	BOX 840, HOLDEN, WV 25625	WYOMING		13.07	20	
H-477	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	WYOMING		7.00	32	
0-111-83	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	WYOMING		4.00	38	
P-586	ISLAND CREEK COAL	BOX 840 HOLDEN WV 25625	WYOMING		132.00	31	
U-31-85	ISLAND CREEK COAL		NICHOLAS		9.00	20	
U-90-83	ISLAND CREEK COAL CO.	PO BOX 313, SUMMERSVILLE, WV	NICHOLAS	CHESTNUT NO. 1	14.05	20	46-06955

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
EM-77	ISLAND CREEK COAL CO.		NICHOLAS		9.20	20	
O-110-83	ISLAND CREEK COAL CO.	BOX 840, HOLDEN, WV 25625	LOGAN	GUYAN NO. 5 REFUSE	80.00	33	46-0244
O-31-83	ISLAND CREEK COAL CO.	BOX 86, FENWICK, WV	NICHOLAS		15.70	32	
EM-76	ISLAND CREEK COAL CO.	%RAYMOND BUTCHER, CALVIN, WV	NICHOLAS		30.30	20	
S-116-85	ISLAND CREEK COAL CO.		NICHOLAS		127.36	10	
U-4006-86	ISLAND CREEK COAL CO.		WYOMING	EAGLE #1	22.20	20	
S-5063-86	ISLAND CREEK COAL CO.		BOONE	ROACH BRANCH STRIP	32.00	10	46-0706
UO-442	ISLAND CREEK COAL CO.	BOX 177, DARVIN, WV	LOGAN	MINE #1	10.30	20	46-0621
UO-550	ISLAND CREEK COAL CO.	EMMETT, WV	LOGAN		4.30	20	
S-4033-86	ISLAND CREEK COAL CO.	BOX 840 HOLDEN, WV 25625	WYOMING	COAL MOUNTAIN #2	414.00	10	
S-5056-86	ISLAND CREEK COAL CO.	PO BOX 840 HOLDEN, WV 25625	LOGAN	B & C SEAM STRIP	150.00	10	
U-5113-86	ISLAND CREEK COAL CO.	PO BOX 840, HOLDEN, WV 25625	LOGAN	PERRY FORK MINE #1	10.60	20	46-0623
U-3001-87	ISLAND CREEK COAL CO.	RT. 1, BOX 48K, CRAIGSVILLE,WV	NICHOLAS	MUDDLETY #3	10.00	20	
S-3063-86	ISLAND CREEK COAL CO.	RT. 1, BOY 48K, CRAIGSVILLE,WV	NICHOLAS	LOWER MUDDLETY #2	379.40	10	
S-24-85	ISLAND CREEK COAL CO.		NICHOLAS	TIOGA-WIDEN #1	173.00	10	46-0318
O-23-82	ISLAND CREEK COAL CO.	RT 66, BOX 176H, DANIELS, WV	NICHOLAS		4.30	20	
EM-100	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	NORTH BRANCH MINE	9.90	20	
EM-69	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT		3.00	20	
I-678	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	NORTH BRANCH	43.00	36	46-0130
I-700	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	AMD TREATMENT	217.70	36	46-0414
O-129-83	ISLAND CREEK COAL CO.	POBOX 213 BAYARD WV 26707	GRANT	NORTH BRANCH #2 REFU	230.53	33	
O-130-83	ISLAND CREEK COAL CO.	POBOX 213 BAYARD WV 26707	GRANT	ALPINE #4 REFUSE	152.00	33	
P-672	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	PREP. PLANT	24.00	31	
P-674	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	PREP. PLANT	60.40	31	
UO-30	ISLAND CREEK COAL CO.	DRAWER 75, CRAIGSVILLE, WV	GRANT	DOBBIN #1	22.50	20	
U-3026-87	ISLAND CREEK COAL CO.	SR RT 1,BOX 48K,CRAIGSVILLE,WV	NICHOLAS	FALLS RUN NO. 1	19.60	20	
U-3048-87	ISLAND CREEK COAL CO.	ST RT 1, BX 48K,CRAIGSVILLE,WV	NICHOLAS		12.50	20	
S-5055-87	ISLAND CREEK COAL CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	ROCKHOUSE OR - EAGLE & #2	21.00	10	
U-5064-88	ISLAND CREEK COAL CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	TURKEYPEN DEEP MINE NO. 1	10.00	20	
U-5009-86	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	#1 MINE	2.20	20	
U-222-83	ISLAND CREEK COAL COMPANY	P.O. BOY 840, HOLDEN, WV 25625	BOONE		3.50	20	
S-5049-86	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	BOONE	MIDDLE KITTANNING ROACH B	31.42	10	
UO-649	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		2.86	20	
S-5004-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	SULPHUR CREEK COMPLEX	41.00	10	
O-5005-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	SULPHUR CREEK COMPLEX	7.00	32	
U-5006-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	SULPHUR CREEK COMPLEX	5.00	20	
U-5007-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	SULPHUR CREEK COMPLEX	5.00	20	
U-5075-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	DINGESS RUN #2	13.00	20	
U-5068-87	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	BOONE	ROACH BRANCH NO 2 MINE	10.89	20	
S-2019-88	ISLAND CREEK COAL COMPANY	STAR RT 1, BOX 48K, CRAIGSVILLE, WV	NICHOLAS	KNIGHT - INK NO. 1 MINE	864.32	10	
O-3072-88	ISLAND CREEK COAL COMPANY	STAR RT. 1, BOX 48K, CRAIGSVILLE WV	NICHOLAS	OVERLAND HAULROAD	68.48	32	
U-5065-88	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	TURKEYPEN DEEP MINE NO. 2	10.00	20	
U-5091-88	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	PERRY FORK MINE NO. 2	10.00	20	
U-5079-88	ISLAND CREEK COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	HE HOLLOW DEEP MINE	5.94	20	
U-4012-89	ISLAND CREEK COAL COMPANY	P.O. BOX 840 HOLDEN, WV 25625	WYOMING	ALPINE #3	7.00	20	
U-4011-89	ISLAND CREEK COAL COMPANY	PO BOX 840, US 119 HOLDEN, WV 25625	WYOMING	ALPINA #1	10.00		
O-4027-89	ISLAND CREEK COAL COMPANY	P.O. BOX 840 US 119 HOLDEN WV 25625	WYOMING	MARIANNA HAULROAD	16.30		
H-409	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		116.00	32	
4-80	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		400.00	10	
94-80	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		653.76	10	
P-606	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		99.00	31	
109-79	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	UPSHUR COMPLEX	140.00	10	46-05[illegible]3
163-76	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD, LEXINGTON, KY	UPSHUR	BEANS MILL	94.00	10	46-04[illegible]5
269-76	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	KEDRON AREA JOB NO. 3	130.00	10	46-04795
57-80	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	TEN MILE STRIP	580.90	10	46-04795

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
57-81	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	AREA NO. 6	63.00	10	46-04795
H-536	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		8.26	32	
H-613	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		9.20	32	
I-699	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		10.60	34	
O-61-82	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		10.00	32	
P-698	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		275.29	31	
S-108-82	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	UPSHUR STRIP	271.33	10	46-04795
S-71-83	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR		443.02	10	46-04795
S-12-82	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	AREA NO. 8	187.96	10	46-05823
D-55-82	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXINGTON, KY	UPSHUR	TALLMANSVILLE #3	4.00	20	
118-78	ISLAND CREEK MINING CO.	BOX 309, RAGLAND, WV 25690	LOGAN	HOLDEN #22	204.00	10	46-05793
O-12-83	ISLAND CREEK MINING CO.	2355 HARRODSBURG RD., LEXTINGTON KY	UPSHUR		16.00	32	
U-5073-87	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	MINGO		36.00	20	
S-5028-89	ISLAND CREEK MINING CO.	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	PINE GAP CONTOUR AND AUGER	57.34	10	
H-433	ITMANN COAL CO.	BOX 222 ITMANN WV 24847	WYOMING	STILL RUN HAULROAD	12.50	32	
H-445	ITMANN COAL CO.	BOX 222 ITMANN WV 24841	WYOMING		2.43	32	
O-11-85	ITMANN COAL CO.	P.O. BOX 890, BLUEFIELD, VA	WYOMING	ITMANN PLANT	339.80	31	46-02252
U-15-84	ITMANN COAL CO.	BOX 222, ITMANN, WV 24847	WYOMING		48.17	20	
U-16-84	ITMANN COAL CO.	BOX 222, ITMANN, WV 24847	WYOMING	MINE NO. 2	14.40	20	46-01885
U-17-84	ITMANN COAL CO.	BOX 222, ITMANN, WV 24847	WYOMING		36.18	20	
S-102-85	J & B COAL		MONONGALIA		12.50	10	
S-80-83	J & B COAL CO.	49 HERITAGE HLS, UNIONTOWN, PA	MONONGALIA	SURFACE	45.00	10	46-06205
S-1044-86	J & B COAL COMPANY	49 HERITAGE HILLS UNIONTOWN PA	HARRISON	DIMARIA STRIP MINE	17.26	10	46-07060
S-44-84	J & D COAL CO.		MONONGALIA		15.60	10	
U-166-83	J & H COAL CO.	PO BOX 337, MASONTOWN, WV	PRESTON		4.00	20	
U-219-83	J & J COAL CO.	BOX 626, CHAPMANVILLE, WV	BOONE		5.85	31	
EM-130	J & J MINING CO.	PO BOX 1080, MORGANTOWN, WV	MONONGALIA	MINE #2	10.00	20	46-05588
EM-132	J & J MINING CO.	PO BOX 1080, MORGANTOWN, WV	MONONGALIA	POKEY #1	15.70	20	46-05588
S-36-85	J & R COAL COMPANY	RD 3, BOX 22, SMITHFIELD, PA 15478	PRESTON		40.72	10	
S-1062-86	J AND J GUZZI ENTERPRISES		HARRISON	J.J.G. #1	10.00	10	
S-1007-88	J&B COAL COMPANY	49 HERITAGE HLS, UNIONTOWN, PA	MARION	SATTERFIELD TRACT	23.43	10	
S-5057-86	J. D. CA-MONT MINING, INC.	P.O. BOX 532, LYBURN, WV 25632	LOGAN		20.70	20	
S-23-62	J.A.L. COAL CO., INC.	24 AMHEARST RD, MORGANTOWN, WV	MONONGALIA	STRIP NO. 1	37.71	10	46-06514
S-61-82	J.E.B.	333 MORGANTOWN RD KINGWOOD WV	PRESTON	J.E.B. INC., NO. 1	18.00	10	46-06568
S-62-84	J.E.B.		PRESTON	JOB NO. 2	40.00	10	46-06568
S-1063-86	J.E.B., INC.		PRESTON		56.00	10	
S-48-81	J.R. COAL CO.	BOX 294, REEDSVILLE, WV	MONONGALIA	JR NO. 2	29.80	10	46-06551
S-1054-86	JADA COAL & CONSTR. CO.		MONONGALIA		12.30	10	
S-1027-89	JADA COAL & CONSTRUCTION	P.O. BOX 3279 MORGANTOWN WV 26505	MONONGALIA	PRATT SURFACE MINE	6.80		
S-5072-87	JAGGED COAL, INCORPORATED	P.O. BOX 185, MARTHA, KY 41559	MINGO	EH-205	269.15	10	
S-1001-86	JAMES ROBINSON EXCAVATING		HARRISON		9.50	10	
S-16-82	JASON COAL CO.	29 WINDING LN, BROOKVILLE, NY	BARBOUR	MCCORD TRACT.	55.92	10	
S-63-82	JASON COAL CO.		BARBOUR		29.00	10	
S-1019-86	JB COAL		PRESTON		42.00	10	
S-52-85	JCL DEVELOPMENT		PRESTON		133.00	10	
S-3035-88	JEFF MINING COMPANY	RT. 3, BOX 225, RAINELLE, WV 25962	FAYETTE	LITTLE LAUREL NO. 1 STRIP	22.00	10	
53-78	JENNINGS, MAURICE	RFD 1 NEWBURG WV 26410	PRESTON		65.00	10	
54-80	JENNINGS, MAURICE	RFD 1 NEWBURG WV 26410	PRESTON	HOWESVILLE	23.00	10	46-01020
S-61-83	JENNINGS, MAURICE	PO BOX 99, NEWBURG, WV	PRESTON		52.00	10	
S-4026-88	JERICHO CONS. & AUG. CO IN	BOX 2, HENSLEY, WV 24843	MCDOWELL	JERICHO AUGER MINE	19.77	10	
UO-49	JERSEY WV COAL		MCDOWELL	JERSEY NO. 1	14.00	20	46-05484
U-51-85	JERUEL COAL CO., INC.		MINGO	#1	5.63	20	46-06754
U-5002-86	JERUEL COAL, INC		MINGO	MINE NO. 2	5.60	20	
U-77-85	JIM DANDY COALS, INC.		LEWIS	PETHTEL MINE	6.34	20	46-04481
UO-380	JO-LEE COAL CO.	PO BOX 446, FAIRMONT, WV	HARRISON	GOBEL #2 VICTORIA #1	12.99	20	46-06030

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
U-211-83	JODIE MINING CO.	GEN. DE., JODIE, WV 26674	FAYETTE		6.00	20	
S-3032-87	JOHN B. HARRIS, INC.	PO DRAWER 389, LEWISBURG, WV	GREENBRIER	SURFACE MINE NO. 1	250.29	10	
U-3071-87	JOHN B. HARRIS, INC.	P.O. DRAWER 389, LEWISBURG, WV	GREENBRIER	TIZ NO. 6 MINE	10.00	20	
U-3063-87	JOHN B. HARRIS, INC.	PO DRAWER 389, LEWISBURG, WV 24901	NICHOLAS	TIZ NO. 5 MINE	56.86	20	
U-3057-88	JOHN B. HARRIS, INC.	P.O. DRAWER 389, LEWISBURG, WV	GREENBRIER	TIZ NO. 7 MINE	40.91	20	
S-3036-89	JOHN B. HARRIS, INC.	PO DRAWER 389 LEWISBURG WV 24901	FAYETTE	NUTTALL SURFACE NO 1	85.00	10	
S-90-84	JOHN BROWN HARRIS		GREENBRIER		72.00	10	40-05972
D-56-82	JOHN BROWN HARRIS	PO DRAWER 389, LEWISBURG, WV	GREENBRIER		5.50	20	
H-356	JOHN BROWN HARRIS	PO DRAWER 389, LEWISBURG, WV	GREENBRIER		27.00	32	
O-86-83	JOHN BROWN HARRIS	PO BOX 207, QUINWOOD, WV	GREENBRIER	BARRI LYNN PLANT RDA	112.56	31	46-05403
S-27-82	JOHN BROWN HARRIS	PO DRWR 389 LEWISBURG WV 24901	GREENBRIER		42.50	10	
S-84-85	JOHN BROWN HARRIS		GREENBRIER		14.10	10	46-07372
U-59-85	JOHN BROWN HARRIS		GREENBRIER	TIZ NO. 2	33.80	20	46-07042
S-3058-89	JOHN BROWN HARRIS, INC	PO DRAWER 389 LEWISBURG WV 24901	FAYETTE	NUTTALL SURFACE NO 2	147.00		
S-3048-86	JOHN BROWN HARRIS, INC.		GREEN/NICH		94.10	10	
D-76-82	JOHN GALT, LTD	GEN DEL, GILBERT, WV 25621	LOGAN		15.41	20	
D-77-82	JOHN GALT, LTD	GILBERT, WV	LOGAN	NO. 3	17.46	20	46-06546
O-40-82	JOHN GALT, LTD	GILBERT WV 25621	LOGAN		4.20	31	46-05067
O-45-82	JOHN GALT, LTD		LOGAN		8.00	38	
UO-275	JOHN ROGER MINING		BOONE		4.00	20	
O-33-82	JOLACO	PO BOX 1080, MORGANTOWN, WV	MONONGALIA		29.80	34	
S-9-83	JONES COAL CO.	POBOX 1503 CUMBERLAND MD 21502	PRESTON		46.00	10	46-06633
S-1023-86	JONES COAL, INC.		PRESTON		54.00	10	46-06633
S-1030-86	JONES COAL, INC.		PRESTON	DOTSON	23.00	10	
NONE	JONTEE MINING CO.		GILMER		5.00	10	
S-1002-86	JOPA COAL CO.		MONONGALIA		3.00	10	
U-5046-86	JOVIC MINING CO., INC.		BOONE	DRY BRANCH #3	11.60	20	
U-5014-86	JOVIC MINING CO., INC.		BOONE	DRY BRANCH NO. 2	1.70	20	
I-732	JULIAN TIPPLE, INC.	P.O. BOX 6100, HUNTINGTON, WV 25770	BOONE		24.00	31	46-03774
O-110-82	JULIANA MINING	ERBACON, WV	WEBSTER	MINE #2	6.20	20	46-05772
O-19-81	JULIANA MINING	ERBACON, WV 26203	WEBSTER		22.50	31	46-06539
S-5-82	JULIANA MINING	ERBACON, WV 26203	WEBSTER	AMOS RUN NO. 1	569.40	10	46-06539
O-2007-87	JULIANA MINING CO., INC.	RT 2, BOX 96, COWEN, WV 26206	WEBSTER		5.70	32	
O-2022-87	JULIANA MINING CO., INC.	RT 2, BOX 96, COWEN, WV	WEBSTER	HAULROAD NO. 1	64.80	32	
S-2013-88	JULIANA MINING CO., INC.	RT. 2, BOX 96, COWEN, WV 26206	WEBSTER	AMOS RUN NO. 2	352.00	10	
U-12-85	JUMACRIS MINING		MINGO		2.00	20	
U-83-84	JUMACRIS MINING		MINGO		1.90	20	
D-132-82	JUMACRIS MINING	PO DRAWER D, GILBERT, WV 25621	MINGO		6.00	20	
D-85-82	JUMACRIS MINING	PO DRAWER D, GILBERT, WV 25621	MINGO		1.60	20	
U-205-83	JUMACRIS MINING	PO DRAWER D, GILBERT, WV	MINGO		6.00	20	
U-73-83	JUMACRIS MINING	PO DRAWER D, GILBERT, WV	MINGO		6.00	20	
UO 141	JUMACRIS MINING	PO DRAWER D, GILBERT, WV 25621	MINGO		12.00	20	
UO-214	JUMACRIS MINING	PO DRAWER D, GILBERG, WV	MINGO		5.00	20	
UO-615	JUMACRIS MINING	PO DRAWER D, GILBERT, WV	MINGO		11.00	20	
UO-77	JUMACRIS MINING	PO DRAWER D, GILBERT, WV 25621	MINGO		15.00	20	
U-5015-87	JUMACRIS MINING, INC.	PO DRAWER D, GILBERT, WV	MINGO	JUMACRIS # 23-A 7 23-B	11.20	20	
D-14-81	JUMAGRIS MINING	PO DRAWER D, GILBERT, WV 25621	MINGO		4.00	20	
U-3054-86	K & B COAL CO.		NICHOLAS	K & B MINE NO. 1	10.00	20	
S-3005-87	K & B COAL COMPANY	BOX 507, SUMMERSVILLE, WV 2665	NICHOLAS	MEARNS & HUNER STRIP	54.00	10	
S-3060-89	K & B COAL COMPANY	800 NORTHSIDE DR., SUMMERSVILLE, WV	NICHOLAS	HARLOW STRIP	66.00	10	
S-118-82	K & T EXCAVATION	PO BOX 359, FAYETTEVILLE, WV	FAYETTE		32.00	10	
S-1001-88	K & Z COAL COMPANY	P.O. BOX 245, BRUCETON MILLS, WV	PRESTON	GIBSON MINE	36.00	10	46-07390
S-121-82	K-STEELE	114 HOUSTON ST BECKLEY WV 2580	FAYETTE		88.00	10	46-01555
S-56-82	K-STEELE	BOX 1662 BECKLEY WV 25801	FAYETTE		12.00	10	
S-6-83	K-STEELE	BOX 1662 BECKLEY WV 25801	FAYETTE	SPRINGTOWN	49.00	10	46-06604

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA II
S-1023-88	K. C. & M. COAL CO., INC.	P.O. BOX 484, KINGWOOD, WV 26537	PRESTON	IRISH RIDGE MINE	35.00	10	
S-46-85	K.C. COAL CO		PRESTON		13.00	10	46-06624
S-75-82	K.C. COAL CO.	RT 1, BOX 1325, KINGWOOD, WV	PRESTON	MINE NO. 1	17.50	10	46-06624
S-95-85	K.I.M.		MINGO		173.64	10	46-05937
179-78	K.I.M. COAL CO.	POBOX 1085 DINGESS WV 25761	MINGO	SURFACE NO. 1	188.00	10	46-05937
2-81	K.I.M. COAL CO.	POBOX 1085 DINGESS WV 25671	MINGO	SURFACE NO. 1	300.00	10	46-05937
S-73-82	K.I.M. COAL CO.	POBOX 1085 DINGESS WV 25671	MINGO		48.00	10	46-05937
S-73-84	K.I.M. COAL CO.	BOX 1085, DINGESS, WV	MINGO	SURFACE NO. 1	317.61	10	46-05937
0-20-83	KANAWHA COAL CO.	PO BOX 38, ASHFORD, WV	BOONE		94.00	38	
0-50-83	KANAWHA COAL CO.	PO BOX 38, ASHFORD, WV	BOONE		30.00	38	
R-6-83	KANAWHA COAL CO.	POBOX 38 ASHFORD WV 25009	BOONE		39.00	33	
U-174-83	KANAWHA COAL CO.	RT 1, BOX 420, ASHFORD, WV	BOONE	MADISON NO. 1	29.00	20	46-02843
U-20-85	KANAWHA COAL CO.	P.O. BOX 38, ASHFORD, WV 25009	BOONE	MILL BRANCH	20.60	20	46-07176
U-224-83	KANAWHA COAL CO.	PO BOX 38, ASHFORD, WV	BOONE	NO 2	30.50	20	46-02844
U-46-83	KANAWHA COAL CO.	PO BOX 38, ASHFORD, WV	BOONE		13.00	20	
U-54-83	KARA COAL CO.	DRAWER T, GILBERT, WV	LOGAN		17.50	20	
UO-613	KARA COAL CO.	PO BOX 474, GILBERT, WV	LOGAN	NO. 1	8.00	20	46-06688
S-3019-87	KAYDEE CONSTRUCTION CO.	198 PINEY VIEW RD, BECKLEY, WV	FAYETTE	PAX #1 SURFACE MINE	30.00	10	
UO-608	KEENAN TRUCKING CO.		KANAWHA		5.00	20	
137-80	KELLEY COAL CO.	P BOX 2248 CLARKSBURG WV 26301	HARRISON	KELLY NO. 3	136.00	10	46-05614
S-32-81	KELLEY COAL CO.	P BOX 2248 CLARKSBURG WV 26301	HARRISON	ALLMAN-KELLEY NO. 4	14.00	10	46-05614
S-68-82	KELLEY COAL CO.	P BOX 2248 CLARKSBURG WV 26301	HARRISON	KELLY NO. 5	57.00	10	46 05614
I-543	KELLY'S CREEK'S N & W RR	2971 E DUPONT AV, SHREWSBU, WV	KANAWHA		3.64	34	
70-76	KELSO COAL CO., INC.	P.O. BOX F, SETH, WV 25181	BOONE	STRIP	315.00	10	46-02040
D-18-82	KEN COAL, INC.	RT. 52, BOX 907, GILBERT, WV	LOGAN		3.00	20	
INC-5-83	KEN-LAN ENERGY CO.		HARRISON		4.60	10	
101-79	KENT COAL	BOX 990 LEWISBURG WV 24901	GREENBRIER		235.00	10	
S-97-82	KENT COAL	BOX 990 LEWISBURG WV 26651	GREENBRIER		175.30	10	
S-77-82	KENT COAL CO.	BOX 990 LEWISBURG WV 24901	FAYETTE		309.00	10	
137-78	KENT COAL CO.	BOX 990 LEWISBURG WV 24901	GREENBRIER	BLUE KNOB MT. TOP	190.00	10	
S-3039-86	KENT COAL CO.		GREENBRIER	SURFACE NO. 1	164.70	10	46-06560
0-133-83	KENTON MEADOWS	DRAWER A GASSAWAY WV 26624	BRAXTON	TIPPLE	2.00	34	
EM-17	KERMIT COAL CO.	PO BOX 367, KERMIT, WV 25674	MINGO		4.00	20	
P-480	KERMIT COAL CO.	POBOX 367 KERMIT WV 25674	MINGO		19.00	31	
0-139-83	KERMIT COAL CO.	POBOX 367 KERMIT WV 25674	MINGO		127.63	38	
I-503	KERMIT COAL COMPANY, INC.	GEN. DEL., TURKEY CK, KY	MINGO	BORDERLAND LOADOUT	10.00	34	15-10449
U-106-83	KERZ COAL CORPORATION	SEDGEWOOD TOWNHOUSE, BLUEFIELD, WV	LOGAN		20.00	20	
0-6021-87	KESSCOALS, INCORPORATED	P.O. BOX 130, WHITESVILLE, WV 25209	KANAWHA	COALBURG LOADOUT	3.88	34	
S-48-85	KESSLER COAL CO.		BOONE		86.10	10	46-06529
D-89-82	KESSLER COALS	PO BOX 130, WHITESVILLE, WV	BOONE		20.40	20	
0-121-83	KESSLER COALS	PO BOX 130, WHITESVILLE, WV	BOONE		3.40	35	46-06240
S-131-82	KESSLER COALS	POBOX 130 WHITESVILLE WV 25209	BOONE	2A STRIP	58.60	10	46-06529
U-3-83	KESSLER COALS		BOONE		13.20	20	
U-4-83	KESSLER COALS	PO BOX 130, WHITESVILLE, WV	BOONE	NO. 2	14.40	20	46-04774
U-202-83	KESSLER COALS	PO BOX 130, WHITESVILLE, WV	BOONE	NUMBER 8 MINE	13.33	20	
U-36-85	KESSLER COALS		BOONE	NOS. 3 AND 3A	27.30	20	46-04774
0-39-85	KESSLER COALS		BOONE	1A STOCKPILE	184.50	31	46-06240
UO-720	KEY COAL CO.	RT 1, BOX 211, SUMMERSVILLE WV	NICHOLAS	MINE NO 1	4.00	20	46-06502
S-84-83	KEYSTONE RESOURCES	330 GRANT ST SUITE 1700 PITTS	MINGO		186.00	10	46-06749
U-186-83	KEYSTONE RESOURCES	300 GRANT ST. SUITE 1700 PITTS	MINGO	KEYSTONE NUMBER 1	18.67	20	46-04784
S-101-85	KEYSTONE RESOURCES		MINGO	KEYSTONE MINE NO. 3	267.51	10	46-06749
0-56-85	KEYSTONE RESOURCES, INC.		MINGO		4.20	34	46-07184
U-5044-87	KEYSTONE RESOURCES, INC.	330 GRANT ST., PITTSBURGH, PA	MINGO	WILLIAMSON #1 MINE	15.55	20	46-073[illegible]
U-5045-87	KEYSTONE RESOURCES, INC.	330 GRANT ST., PITTSBURGH, PA	MINGO	WILLIAMSON #2	13.65	20	
U-5057-87	KEYSTONE RESOURCES, INC.	330 GRANT ST., PITTSBURGH, PA	MINGO	ALMA #1 MINE	8.42	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
U-5058-87	KEYSTONE RESOURCES, INC.	330 GRANT ST., PITTSBURGH, PA	MINGO	ALMA #2 MINE	10.23	20	
S-5059-87	KEYSTONE RESOURCES, INC.	330 GRANT ST., PITTSBURGH, PA	MINGO	ALMA SURFACE MINE	30.20	10	
S-1026-86	KING KNOB COAL CO.		MONONGALIA	C-3	20.00	10	46-03236
112-76	KING KNOB COAL CO.		BARBOUR	CONSOL TRACT	55.00	10	46-02684
8-79	KING KNOB COAL CO.		BARBOUR	NO. 37	72.00	10	46-02684
S-29-81	KING KNOB COAL CO.	PO BOX, CLARKSBURG, WV 26301	BARBOUR	NO. 37 MAIN JOB	180.50	10	46-02684
178-80	KING KNOB COAL CO.	P BOX 268 CLARKSBURG WV 26301	HARRISON	ROBINSON RUN	111.80	10	46-05763
S-53-82	KING KNOB COAL CO.	PO BOX 268, CLARKSBURG, WV	HARRISON	ROBINSON RUN	8.00	10	46-05763
56-79	KING KNOB COAL CO.	PO BOX 268, CLARKSBURG, WV	MONONGALIA	C3	94.00	10	46-0323
66-79	KING KNOB COAL CO.	POBOX 268 CLARKSBURG WV 26301	MONONGALIA	C3 STRIP	251.00	10	46-0323
H-170	KING KNOB COAL CO.	POBOX 268 CLARKSBURG WV 26301	MONONGALIA	NOT INSPECTED	16.00	32	
H-87	KING KNOB COAL CO.	POBOX 268 CLARKSBURG WV 26301	MONONGALIA	NOT INSPECTED	14.00	32	
S-36-82	KING KNOB COAL CO.	POBOX 268 CLARKSBURG WV 26301	MONONGALIA	C3 STRIP	87.10	10	46-03236
S-1068-86	KING KNOB COAL CO.		MONONGALIA		57.00	10	
S-2051-86	KING KNOB COAL CO., INC.	STATION C, BX 7500 CLARKS. WV	BARBOUR	SURFACE MINE NO. 37	39.00	10	
EM-98	KING POWELLTON MINING CO.	PO BOX 175, HANSFORD, WV 25103	FAYETTE		7.00	20	
0-51-82	KING POWELLTON MINING CO.	POBOX 175 HANSFORD WV 25103	FAYETTE		25.38	38	
P-694	KING POWELLTON MINING CO.	POBOX 175 HANSFORD WV 25103	FAYETTE		7.70	31	
R-717	KING POWELLTON MINING CO.		FAYETTE		15.30	33	
UO-180	KING POWELLTON MINING CO.	PO BOX 175, HANSFORD, WV 25103	FAYETTE	MINE NO. 4	4.50	20	46-00510
UO-428	KING POWELLTON MINING CO.	PO BOX 175, HANSFORD, WV 25103	FAYETTE		23.00	20	
UC-677	KING POWELLTON MINING CO.	PO BOX 175, HANSFORD, WV	RALEIGH		4.00	20	
P-685	KINGWOOD COAL COMPANY	84 ALBRIGHT RD, KINGWOOD WV 26537	PRESTON		30.70	31	
R-673	KINGWOOD COAL COMPANY	84 ALBRIGHT RD., KINGWOOD, WV 26537	PRESTON		57.80	33	
U-1010-89	KINGWOOD COAL COMPANY	84 ALBRIGHT, KINGWOOD WV 26537	PRESTON	SARAH MINE	9.00	20	
3-80	KINGWOOD COAL COMPANY	84 ALBRIGHT, KINGWOOD, WV 26537	PRESTON	KINGWOOD MINING	28.00	10	46-02560
U-5033-86	KIT, INC.		LOGAN	MINE NO. 1	2.00	20	
11-80	KITCHEKAN FUEL	1426 E MAIN ST PRINCETON WV	MERCER	PIEDMONT STRIP	181.40	10	46-06163
P-691	KITCHEKAN FUEL	1426 E MAIN ST. PRINCETON WV	MERCER	ARISTA PREP PLANT	72.90	31	46-03229
D-12-82	KITCHEKAN FUEL	1426 E. MAIN ST., PRINCETON,WV	WYOMING		12.90	20	
UO-629	KITCHEKAN FUEL	1426 E. MAIN ST., PRINCETON,WV	WYOMING	RING BRANCH 6A	12.70	20	46-06163
UO-640	KITCHEKAN FUEL	1426 E MAIN ST., PRINCETON, WV	WYOMING		6.50	20	
S-2044-86	KODIAK LAND CO., INC.	902 MARGAPET ST., SUMERSVLL WV	BRAXTON	DENNISON STRIP	87.70	10	
S-3052-87	KODIAK LAND CO., INC.	902 MARGARET ST. SUMMERSVIL,WV	FAYETTE	SATURDAY-SUNDY RD STRIP 1	32.00	10	
S-3065-86	KODIAK LAND CO.,INC.		NICHOLAS	MUDDLETY STRIP	72.00	10	
D-36-82	L & K MILLER MING INC	BOX 118, LEIVASY, WV	NICHOLAS	NO. 1	16.00	20	46-06375
U-3046-86	L & K MILLER MINING, INC.		NICHOLAS	DEEP MINE NO. 3	10.00	20	46-0727
S-3058-86	L & R EQUIPMENT CO.		NICHOLAS	STARCHER/O'QUINN SURFACE	14.00	10	46-0718
U-3015-86	L L R INC.		NICHOLAS	MINE NO. 1	10.00	20	
I-498	L.H. & J. COAL CO.		MONONGALIA		3.70	38	46-0272
0-29-85	L.H.&J. COAL CO		MONONGALIA		4.77	32	46-02922
232-76	L.H.&J. COAL CO.	POBOX 450 MORGANTOWN WV 26505	MONONGALIA	L.H. & J.	35.00	10	46-02722
51-74	L.H.&J. COAL CO.		MONONGALIA	L.H. & J.	37.20	10	46-02722
UO-619	LACKEY COAL CO.	BOX 303, BIRCH RIVER, WV 26610	BRAXTON		5.80	20	
0-155-83	LADY H COAL CO.	PO BOX 150, LEIVASY, WV 26676	NICHOLAS	QUINWOOD PREP & RDA	78.00	33	46-03202
0-9-83	LADY H COAL CO.	BOX 185 LEIVASY WV 26676	NICHOLAS	NO. 5 SIDING	8.40	36	46-03117
U-148-82	LADY H COAL CO.	BOX 185, LEIVASY, WV 26676	NICHOLAS	NO. 7	39.94	20	46-01474
0-36-85	LADY H COAL CO.		NICHOLAS		8.00	38	46-40086
0-175-83	LADY H. COAL CO.	PO BOX 150, LEIVASY, WV 26676	GREENBRIER		74.38	38	
S-15-82	LADY H. COAL CO.	BOX 185 LEIVASY WV 26676	GREENBRIER	NO. 29 SURFACE	336.00	10	46-04994
0-10-83	LADY H. COAL CO.	BOX 185 LEIVASY WV 26676	NICHOLAS	BLUE BR REFUSE AREA	143.91	33	
NONE	LAMBERT COAL CO.		BARBOUR	TIPPLE	0.00	34	
S-34-81	LAND USE CORP.	BOX 460 SUMMERSVILLE WV 26651	NICHOLAS		98.00	10	
161-77	LAND USE CORP.	BOX 460, SUMMERSVILLE, WV	CLAY	THERMO FOSSIL/PISGAH	59.00	10	
98-79	LAND USE CORP.	BOX 460 SUMMERSVILLE WV 26651	CLAY		35.00	10	

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S-98-84	LAND USE CORP.		CLAY		70.00	10	
O-137-82	LAND USE CORP.	BOX 460, SUMMERSVILLE, WV	NICHOLAS	BEECH GLEN NO. 1	6.00	20	46-06608
S-110-82	LAND USI CORP.	BOX 460 SUMMERSVILLE WV 26651	NICHOLAS	STRIP NO. 3	177.00	10	46-06402
S-18-81	LAND USE CORP.	BOX 460 SUMMERSVILLE WV 26651	NICHOLAS		57.00	10	
S-43-82	LAND USE CORP.	BOX 460 SUMMERSVILLE WV 26651	NICHOLAS		217.00	10	
S-80-84	LAND USE CORP.	PO BOX 460, SUMMERSVILLE, WV	NICHOLAS		344.00	10	46-06127
U-59-83	LAND USE CORP.	BOX 460, SUMMERSVILLE, WV	NICHOLAS		8.20	20	
S-58-84	LAND USE CORP.	PO BOX 460, SUMMERSVILLE, WV	NICHOLAS		237.50	10	46-02506
S-2-83	LAND USE CORP.	BOX 460 SUMMERSVILLE WV 26651	NICHOLAS		456.00	10	
O-3059-87	LAND USE CORP.	P.O. BOX 460, SUMMERSVILLE, WV	FAYETTE	ALLOY COAL LOAD-OUT	22.40	34	
S-34-82	LANDMARK CORPORATION	614 CHAS NAT'L PLAZA CHAS WV 25301	BOONE	HEWITT NO. 52	95.00	10	46-05830
S-5069-88	LANDMARK CORPORATION	614 CHAS,NAT'L PLAZA CHAS WV 25001	BOONE	LANDMARK SURFACE MINE NO 1	184.52	10	
S-5047-89	LANDMARK CORPORATION	614 CHARS NATL PLAZA CHARS WV 25301	BOONE	LANDMARK SURFACE MINE 2	240.60	10	
61-78	LANG BROTHERS	PO BOX 910, BRIDGEPORT, WV	LEWIS	LAUREL LICK	191.00	10	46-04497
S-67-84	LANG CONSTR., INC.	PO BOX 910, BRIDGEPORT, WV	NICHOLAS		105.00	10	
U-1023-87	LAPPITT, INC.	221 RIVERSIDE DRIVE, MADISON, WV	HARRISON	MINE #1	10.00	20	
U-27-84	LAROSA FUEL	PO BOX 393, BRIDGEPORT, WV	LEWIS	#1 MINE	10.00	20	
98-74	LAROSA FUEL		RANDOLPH	THREE FORKS	21.00	10	46-02571
O-26-83	LAROSA FUEL	420 BUCKHANNON PIKE CLARKS. WV	RANDOLPH	TIPPLE MAYBE	4.80	34	
O-33-83	LAROSA FUEL	420 BUCKHANNON PIKE CLARKS. WV	RANDOLPH	TIPPLE - NORTON	4.20	34	
48-81	LAROSA FUEL	420 BUCKHANNON PK, CLARSBUR,WV	UPSHUR	HODGEVILLE	125.00	10	46-06206
79-76	LAROSA FUEL		UPSHUR	THREE FORKS COAL	77.20	10	46-02671
O-154-83	LAROSA FUEL	420 BUCKHANNON PK,CLARKSBUR,WV	UPSHUR		9.22	34	
O-29-83	LAROSA FUEL	420 BUCKHANNON PK,CLARKSBUR,WV	UPSHUR	CAB & TIPPLE	6.10	34	46-03155
S-21-81	LAROSA FUEL	420 BUCKHANNON PIKE,CLKRSB, WV	UPSHUR		95.90	10	46-04351
S-39-84	LAROSA FUEL	420 BUCKHANNON PIKE, CLARKS,WV	UPSHUR	SUMMERS-MARKS-REXRO	117.60	10	46-04351
S-4-85	LAROSA FUEL		UPSHUR	MARTIN FARM	35.40	10	46-04351
S-89-83	LAROSA FUEL	PO BOX 393, BRIDGEPORT, WV	UPSHUR		115.50	10	46-06206
O-1027-86	LAROSA FUEL CO.		HARRISON	LAROSA FUEL CO.	6.00	30	
S-1051-86	LAROSA FUEL CO. INC.		MONONGALIA		231.50	10	
S-2012-86	LAROSA FUEL CO., INC.		UPSHUR		26.60	10	46-02671
S-2053-86	LAROSA FUEL CO., INC.	420 BUCKHNNON PK CLARKSBURG WV	UPSHUR	TURKEY RUN	5.70	10	
S-1040-87	LAROSA FUEL CO., INC.	420 BUCKHANNON PK, CLARKSBU,WV	HARRISON	MARS SURFACE MINE	67.90	10	
S-1001-89	LAROSA FUEL CO., INC.	420 BUCKHANNON PIKE, CLARKSBURG, WV	TAYLOR	SMITH SURFACE MINE	67.00	10	
S-2028-87	LAROSA FUEL COMPANY, INC.	BUCKHANNON PIKE, CLARKSBURG,WV	UPSHUR	COON SURFACE MINE	38.90	10	46-04351
S-1033-88	LAROSA FUEL COMPANY, INC.	420 BUCKHANNON PIKE, CLARKSBURG, WV	HARRISON	LITTLE ISAAC'S CREEK SURFC	30.66	10	
U-5043-87	LAUREL COAL CORP.	BOX 780, DANVILLE, WV	BOONE	HAMPTON NO. 45	17.00	20	46-07635
S-5046-89	LAUREL CREEK COMPANY, INC.	DRAWER 569 LOUISA KY 41230	MINGO/LOGA	DINGESS SURFACE MINE	840.62	10	
O-5051-89	LAUREL CREEK COMPANY, INC.	DRAWER 569 LOUISA KENTUCKY 41230	MINGO/LOGA	DINGESS SURFACE MINE	30.57	34	
U-139-83	LAUREL RUN MINING CO.	ST RT, BOX 245, MT. STORM, WV	GRANT	MINE NO. 1	278.00	20	46-02845
UO-182	LAURITA ENERGY CORPORATION	PO BOX 1080, MORGANTOWN, WV	MONONGALIA		4.00	20	
S-1057-86	LAURITA ENERGY CORPORATION	P.O. BOX 1080, MORGANTOWN, WV	MONONGALIA	REDSTONE AND SWICKLEY	24.55	10	46-06973
U-1085-86	LAURITA ENERGY CORPORATION	P.O. BOX 1080, MORGANTOWN, WV 26507	MONONGALIA	CROOKED RUN MINE	30.00	20	
S-1018-89	LAURITA ENERGY CORPORATION	PO BOX 1080 MORGANTOWN WV 26507	MONONGALIA	DAVIS MINE	23.92	10	
148-78	LAURITA TRUCKING & EXCA.	P O BOX 1080 MORGANTOWN WV	MONONGALIA		46.00	10	46-05588
S-113-85	LAWRENCE T. BECKERLE		NICHOLAS		31.00	10	
O-20-85	LAYLAND COAL CO		FAYETTE		7.41	34	
U-124-83	LEAH COAL CO., INC.	PO BOX 101, POND GAP, WV	KANAWHA		3.76	20	46-01903
O-32-81	LECKIE SMOKELESS	DRAWER A, RUPERT, WV 25984	GREENBRIER		8.44	20	
U-3066-88	LECKIE SMOKELESS COAL	DRAWER A RUPERT WV 25984	GREENBRIER	MINE NO 65	10.00	10	
R-3033-89	LECKIE SMOKELESS COAL CO	DRAWER A RUPERT WV 25984	GREENBRIER	NO 42 REFUSE	2.00	33	
S-3009-89	LECKIE SMOKELESS COAL CO	DRAWER A RUPERT WV 24985	GREENBRIER	BIG MOUNTAIN SURFACE NO 2	406.00		
O-1-82	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER		33.00	32	
O-67-82	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER		24.00	31	
31-72	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER	NO. 1 STRIP	400.00	10	46-06244

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA 1
32-81	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	ROCK KAMS	530.00	10	46-06527
56-81	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER		300.00	10	
D-125-82	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		9.00	20	
H-384	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	LESS MCCLUNG	47.00	32	46-05787
H-410	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		18.00	32	
H-611	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25954	GREENBRIER	ROCK CAMP HAULROAD	13.60	32	46-08137
D-103-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		35.51	33	
O-104-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		12.95	34	
O-105-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		23.98	38	
O-71-83	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER		10.00	38	46-00942
S-47-83	LECKIE SMOKELESS COAL CO.	PO DRAWER A, RUPERT, WV	GREENBRIER	MEADOW BLUFF STRIP	186.72	10	46-06761
S-60-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	JOE KNOB PERMIT	129.70	10	46-06672
S-682	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		3.00	38	
S-90-82	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	RATTLESNAKE RUN STRIP	154.00	10	46-06681
S-99-83	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	NO. 50	11.00	10	
U-107-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER	NO. 57 DEEPMINE	10.00	20	
U-142-83	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER		17.00	20	
UO 379	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER		5.00	20	46-05787
UO-571	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER		6.80	20	
U-40-85	LECKIE SMOKELESS COAL CO.		GREENBRIER	MINE NO. 62	23.00	20	
U-3020-86	LECKIE SMOKELESS COAL CO.		GREENBRIER	BUSH KNOB NO. 1	17.00	20	
S-3050-86	LECKIE SMOKELESS COAL CO.		GREENBRIER	LAFAYETTE SPRINGS SURFACE	289.25	10	
S-3076-86	LECKIE SMOKELESS COAL CO.	PO DRAWER A, RUPERT, WV 25984	GREENBRIER	CHERRY KNOLL SURFACE MINE	486.00	10	
U 3017-87	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	CHERRY KNOLL NO. 1	10.00	20	
U-3030-87	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER	CHERRY KNOLL NO. 2	12.00	20	
U 3062-87	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV	GREENBRIER	BUCK LILLY NO. 1	10.00	20	
U-3070-87	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	CHERRY KNOLL NO. 2	10.00	20	
U-3074-87	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	MINE NO. 63	12.00	20	
C 3015-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	BLUE RIDGE HAUL ROAD	10.00	32	
D 3017-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	BLUE RIDGE #8 HAUL ROAD	10.00	32	
S-3011-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	BLUE RIDGE SURFACE MINE	88.00	10	
U 3012-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	NO. 1 DEEP MINE	10.00	20	
U-3013-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25964	GREENBRIER	NO. 2 DEEP MINE	10.00	20	
U-3014-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25964	GREENBRIER		10.00	20	
U 3046-88	LECKIE SMOKELESS COAL CO.	DRAWER A, RUPERT, WV 25984	GREENBRIER	MINE NO. 64	25.62	20	
S-3070-88	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	BIG MT. NO. 1 SURFACE MINE	67.00	10	
S-3028-88	LECKIE SMOKELESS COAL CO.	DRAWER A RUPERT WV 25984	GREENBRIER	CHERRY KNOLL NO 2 SURFACE	109.00	10	
R-3078-86	LECKLIE SMOKELESS COAL CO.	DRAWER A RUPERT, WV	GREENBRIER		30.00	33	
UO-105	LEE ANN COAL CO.	155 5TH AVE., MADISON, WV	LOGAN		4.00	20	
O-86-82	LESLIE COAL CO.	DRAWER G, WELCH, WV	MCDOWELL	NO. 2	26.40	20	46-04845
S-3007-89	LEVEL LAND CONST. CO., INC	1973 OAK RIDGE DRIVE, CHARLESTON WV	NICHOLAS	HAMRICK-BREDON MINE	48.00	10	
S-88-82	LEVEL LAND CONSTR. CO.,INC	BOX 56, NETTIE, WV	NICHOLAS		57.00	10	46-06385
S-96-83	LEVEL LAND CONSTR. CO.,INC	PO BOX 56, NETTIE, WV	NICHOLAS	FLANAGON	25.00	10	46-06385
S-3018-86	LEVEL LAND CONSTRUCTION CO		NICHOLAS	CHURCH-HAMON MINE	63.00	10	
S-3026-88	LEVEL LAND CONSTRUCTION CO	1973 OAK RIDGE DRIVE, CHARELSTON,WV	NICHOLAS	FLANAGAN MINE	75.80	10	
UO-679	LEXIE COAL CO.	BOX 303, BIRCH RIVER, WV	BRAXTON		8.50	20	
S-86-85	LILLY BROOK COAL CO.		RALEIGH		34.00	10	
S-49-83	LILLYBROOK COAL CO.		MERCER	MINE NO. 21	30.00	10	46-06662
S-7-85	LINDY COAL	PO BOX 4308, CHAPMANVILLE, WV	LOGAN	LAWSON HEIRS	338.05	10	46-06684
S-5073-86	LINDY COAL II, INC.	PO BOX 4308 CHAPMANVILLE, WV	LOGAN	MIDDLE FORK STRIP	149.40	10	
U-5098-86	LINDY COAL, INC.		LOGAN	ALMA MINE NO. 1	19.00	20	
S-29-83	LIONEL COAL CO.	PO DRAWER 340, SUMMERSVILLE,WV	NICHOLAS	GRACE NO. 1	92.00	10	46-06652
S-65-83	LIONEL COAL CO.	BOX 340, SUMMERSVILLE, WV	WEBSTER	GRACE NO. 2	30.00	10	46-06802
S-3010-86	LIONEL COAL COMPANY INC	PO DRAWER 340 SUMMERSVILLE WV 26651	NICHOLAS	GRACE NO3	132.00		
D-716	LITE COAL MINING CO., INC.	P.O. BOX 2207, WESTOVER, WV 26502	BRAXTON		6.44	'20	46-06168

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
U-216-83	LITTLE 'B' COAL CO.	BOX 490, MOHAWK, WV	MCDOWELL		5.20	20	
U-59-84	LITTLE DAVID MINING CORP.	BOX 2, HENSLEY, WV 24843	MCDOWELL	NO 1	4.34	20	46-04600
U-17-85	LITTLE FALLS MINING CO.		MONONGALIA		11.00	20	
U-43-85	LITTLE HOPE NO. 2 MINING		MINGO		18.00	20	
U-5084-88	LO MING COAL CORPORATION	P.O. DRAWER T, GILBERT, WV	LOGAN	MINE NO. 8	5.00	20	
U-5085-88	LO MING COAL CORPORATION	P.O. DRWER T, GILBERT, WV 25621	LOGAN	MINE NO. 9	9.85	20	
U-5049-87	LO-MING COAL CORP.	PO DRAWER T, GILBERT, WV	LOGAN	#1, #2, #3, #4 DEEP MINES	12.50	20	
0-5092-87	LO-MING COAL CORPORATION	P.O. DRAWER T, GILBERT, WV	LOGAN	#1 PREP PLANT	50.80	31	
0-5035-88	LO-MING COAL CORPORATION	P.O. DRAWER T, GILBERT, WV 25621	LOGAN	#1 REFUSE FACILITY	39.00	33	
U-5036-88	LO-MING COAL CORPORATION	P. O. DRAWER T, GILBERT, WV 25621	LOGAN	NO. 6 & 7 DEEP MINES	5.00	20	
U-5050-86	LOBATA COAL CO.		MINGO	CEDAR GROVE NO. 1	2.50	20	
S-5011-87	LOBATA COAL CO.	PO BOX 722, MATEWAN, WV	MINGO	MARY TAYLOR MTN. PROJ.	216.21	10	
U-5012-87	LOBATA COAL CO.	PO BOX 722, MATEWAN, WV	MINGO		8.43	10	
0-5013-87	LOBATA COAL CO.	PO BOX 722, MATEWAN, WV	MINGO		19.80	32	
U-5046-87	LOBATA COAL CO.	PO BOX 660, MATEWAN, WV	MINGO	SYCAMORE CREEK MINE	9.37	20	
S-5052-87	LOBATA COAL CO.	PO BOX 660, MATEWAN, WV	MINGO	WILSON SURFACE MINE	168.60	10	
U-5053-87	LOBATA COAL CO.	PO BOX 660, MATEWAN, WV	MINGO	KALOS # 1 DEEP MINE	33.34	20	
U-5054-87	LOBATA COAL CO.	PO BOX 660, MATEWAN, WV	MINGO	KALOS # 2 DEEP MINE	26.11	20	
U-5034-86	LOBATA COAL COMPANY	P.O. BOX 660, MATEWAN, WV 25678	MINGO	ALMA MINE #1	4.40	20	
H-619	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		31.00	32	
0-131-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO	SPOT LOADOUT	31.11	32	46-06755
0-30-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		23.00	33	
0-32-84	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		18.07	31	
0-74-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		6.76	38	
0-90-82	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25676	MINGO		3.60	38	
U-116-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		7.80	20	
U-201-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		1.53	20	
U-55-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO	ALMA NO 3	7.00	20	46-06675
U-56-83	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO	ALMA 4	4.53	20	46-0340
UO-667	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		7.56	20	
UO-705	LOBATA COAL COMPANY	PO BOX 660 MATEWAN WV 25678	MINGO		2.91	20	
0-5051-86	LOBATA COAL COMPANY	PO BOX 660, MATEWAN, WV 25678	MINGO		59.34	32	
S-5112-86	LOBATA COAL COMPANY	PO BOX 722 MATEWAN WV 25678	MINGO	ALAMO M.T.R.	149.88	10	
0-5008-88	LOBATA COAL COMPANY	P.O. BOX 660, MATEWAN, WV 25678	MINGO	SYCAMORE CRK REFUSE DISPSL	15.16	33	
S-5033-88	LOBATA COAL COMPANY	P.O. BOX 660, MATEWAN, WV 25678	MINGO	SPROUSE CREEK SURFACE MINE	485.42	10	
0-5040-88	LOBATA COAL COMPANY	P.O. BOX 660, MATEWAN, WV 25670	MINGO	RED JACKET LOADOUT	9.20	34	
S-5017-89	LOBATA COAL COMPANY	P.O. BOX 660 MATEWAN WV 25678	MINGO	MARY TAYLOR MOUNTAIN	126.00		
UO-353	LOGAN COALS, INC.	BOX 38, STOLLINGS, WV	LOGAN		4.80	20	
U-5100-86	LONG BRANCH ENERGY	RT 1, BOX 39, CLOTHIER, WV	BOONE	HAMPTON NO. 42	7.80	20	46-07289
S-3080-87	LONG BRANCH FUELS, INC.	BOX 1614, BECKLEY, WV 25802-1614	RALEIGH	GLEN ALUM TUNNEL #1	57.00	10	46-07538
67-80	LONG, DAVIS ROSS		UPSHUR		18.00	10	
H-111	LOW ASH INC.	BOX 685, RAINELLE, WV	GREENBRIER		27.00	32	
S-59-83	LOW ASH INC.	PO BOX 685, RAINELLE, WV	GREENBRIER	VIKING NO. 5	118.00	10	46-03892
S-82-85	LOYAL G. FORMAN & SON		PRESTON		50.00	10	
S-1006-87	LOYAL G. FORMAN & SON	RT 2, BOX 234, ALBRIGHT, WV	PRESTON	EVERLY	15.00	10	
S-1009-89	LOYAL G. FORMAN AND SON	RT. 2, BOX 234, ALBRIGHT, WV 26519	PRESTON	WESLEY MINE	60.00	10	46-06765
R-6-84	LOYAL HAYES-HAYES DRILLING	PO BOX 484, SUMMERSVILLE, WV	NICHOLAS		5.60	33	
S-3049-89	LUCAS JADE ENTERPRISES INC	BOX 1028 BECKLEY WV 25802	RALEIGH	SURFACE NO 1	55.00		
UO-256	LURITA ENERGY CORPORATION	P.O. BOX 1080, MORGANTOWN, WV 26507	MONONGALIA		1.96	20	
R-4037-86	LUSK LUMBER CO., INC.	PO BOX 57 HERDON, WV 24726	WYOMING		1.00	33	
U-5056-87	LYNK COAL COMPANY, INC.	P.O. BOX 220, VERNER, WV 25650	LOGAN	ROCKHOUSE BR - EAGLE & #2	4.77	20	
S-90-85	LYNN LAND		MINGO		147.00	10	
S-5015-86	LYNN LAND CO.		MINGO		97.00	10	
UO-175	LYNN LAND COAL CO.	BOX 97, MADISON, WV	BOONE	WINIFREDE MINE NO. 1	4.00	20	46-056[illegible]7
10-78	LYNN LAND COAL CO.	PODRAWER D GILBERT WV 25621	MINGO	SKILLET TRACT	250.00	10	46-05664

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
116-77	LYNN LAND COAL CO.	PO DRAWER D, GILBERT, WV	MINGO	HARRY'S BRANCH	65.00	10	46-0561
121-79	LYNN LAND COAL CO.	PODRAWER D GILBERT WV 25621	MINGO	TWISTED GUN	40.00	10	46-0508
180-77	LYNN LAND COAL CO.		MINGO	HARRY BRANCH	195.00	10	46-0561
21-80	LYNN LAND COAL CO.	GARY, WV	MINGO		177.00	10	
84-76	LYNN LAND COAL CO.		MINGO	TWISTED GUN GAP	222.10	10	46-0508
S-47-84	LYNN LAND COAL CO.	GILBERT, WV	MINGO		97.00	10	
S-5082-86	LYNN LAND COAL CO.		MINGO		177.00	10	
S-5090-87	LYNN LAND COMPANY	P.O. DRAWER D, GILBERT, WV	MINGO	SUMMERFIELD SURFACE OPERT	304.00	10	
UO-481	M & A MINING, INC.	P.O. NOC 837, GRUNDY, WV 24614	MCDOWELL		20.00	20	
O-45-84	M & B COAL CO.		WYOMING		3.93	33	
U-38-83	M & B COAL CO.	DRAWER G, WELCH, WV	WYOMING	MINE NO. 15	13.10	20	46-0528
U-4008-86	M & B COAL COMPANY	DRAWER G, WELCH, WV 24801	MCDOWELL	MCBRIDE	15.33	20	
S-5055-88	M & D MINING COMPANY	P.O. BOX 307, MT. GAY, WV 25637	LOGAN	SURFACE MINE NO. 3	37.00	10	
S-5041-88	M & D MINING COMPANY	P.O. BOX 307, MT. GAY, WV 25637	LOGAN	SURFACE MINE NO. 2	37.00	10	
U-144-83	M & H COAL COMPANY	P. O. BOX 8 MALLORY WV 25634	LOGAN	15A	4.81	20	46-0138
U-145-83	M & H COAL COMPANY	P. O. BOX 8 MALLORY WV 25634	LOGAN		11.71	20	
U-147-83	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN	JANE ANN #10-A	9.69	20	
UO-230	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN		64.00	20	
UC-406	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN		8.00	20	
O-35-84	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN		123.43	31	
U-5008-87	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN	MINE NO. 3	6.00	20	
U-5116-86	M & H COAL COMPANY	PO BOX 8, MALLORY, WV 35634	LOGAN	MINE NO. 7	9.01	20	46-0721
O-5024-87	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN	HAULROAD NO. 1	17.00	32	
U-5079-87	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	MINGO	LCG-3 MINE	9.00	20	
U-5080-87	M & H COAL COMPANY	P.O. BOX 8, MALLORY, WV 25634	MINGO	W-3 MINE	13.50	20	46-0751
U-5025-89	M & H COAL COMPANY	PO BOX 8 MALLORY WV 25634	LOGAN	DEEP MINE NO 35	9.94	20	
O-5039-89	M & H COAL COMPANY	PO BOX 8, MALLORY, WV 25634	LOGAN	REFUSE DISPOSAL AREA NO 1	19.97	38	
UO-639	M & J COAL CO.	1479 BERRY ST., FAIRMONT, WV	MARION		1.00	20	46-062
U-1037-86	M & J COAL CO., INC.		HARRISON	WILLIAMS	14.00	20	46-047
S-35-84	M & M LINESTONE, INC.	RT. 12, BOX 245, MORGANTOWN, WV	MARION	NO. 3	30.00	10	
U-57-83	M.A.E. - WEST, INC.	41 EAGLES RD, BECKLEY, WV	BOONE	ELISA FORK	125.90	20	
O-5057-88	M.A.E. WEST INC	41 EAGLES ROAD BECKLEY WV 25801	BOONE	JAKE GORE REFUSE DISPOSAL	205.50	33	
UO-268	MABEN ENERGY	41 EAGLES RD, BECKLEY, WV	WYOMING	MABEN NO. 3	4.20	20	46-0171
UO-253	MABEN ENERGY CORP.	41 EAGLES RD, BECKLEY, WV	WYOMING	MABEN NO. 5 PUNCHOUT	5.70	20	46-0507
UO-727	MABEN ENERGY CORP.	41 EAGLES RD, BECKLEY, WV	WYOMING		4.90	20	
86-80	MAGNET COAL, INC.	POBOX 12190 LEXINGTON KY 40581	MINGO	NO. 1 SURFACE MINE	600.00	10	46-0716
S-64-82	MAGNET COAL, INC.	POBOX 12190 LEXINGTON KY 40581	MINGO	NO. 27 CONTOUR	166.70	10	
S-5045-89	MAGNET COAL, INCORPORATED	RT 1 BOX 401A DELBARTON WV 25670	MINGO	RIFFE BRANCH MINE	55.00	10	
UO-532	MAIDEN MINING CO.	PO BOX 235, MAIDSVILLE, WV	MONONGALIA		4.16	20	
UO-458	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV	NICHOLAS		13.00	20	
H-155	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV 25211	NICHOLAS		27.80	32	
H-179	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV 25211	CLAY		20.00	36	
O-109-83	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV 25211	CLAY		15.00	38	
179-77	MAJESTIC MINING INC.	BOX 1672 WIDEN WV 25211	NICHOLAS	TAYLOR	127.00	10	
87-76	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV 25211	NICHOLAS	ELM	21.25	10	46-06349
O-124-82	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV 25211	NICHOLAS		4.80	20	
O-126-82	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV	NICHOLAS	NO. 5	4.19	20	46-05717
H-326	MAJESTIC MINING INC.	BOX 1672 WIDEN WV 25211	NICHOLAS		42.00	32	
UO-269	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV	NICHOLAS		3.00	20	
UO-657	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV	NICHOLAS	NO. 6	4.00	20	46-06570
UC-676	MAJESTIC MINING INC.	BOX 1672, WIDEN, WV	NICHOLAS		2.60	20	
UO-88	MAJESTIC MINING INC.		NICHOLAS		10.40	20	
NONE	MAJESTY COAL CO.		BARBOUR	BANKRUPT	15.00	33	
S-2032-87	MANGUS COAL, INC.	P.O. BOX 99, NEWBURG, WV 26410	BARBOUR	LITTLE COVE RUN NO. 1	56.00	10	
U-1012-88	MANLEY CHAPEL RESOURCS INC	P.O. BOX 667, CLARKSBURG, WV 26302	MARION	MANLEY CHAPEL	6.25	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA IC
O-140-83	MANLO MINING CO.	PO BOX 1267, MINNEAPOLIS, MN	FAYETTE	SPRINGDALE PREP PLANT	14.00	31	
UO-188	MANLO MINING CO.	PO BOX 1267, MINNEAPOLIS, MN	SUMMERS		8.00	20	
O-17-84	MANLO MINING CO.	PO BOX 1267, MINNEAPOLIS, MN	SUMMERS		7.00	33	
O-58-83	MAPLE MEADOW MINING CO.	GEN. DEL., CANNELTON, WV 25036	RALEIGH		143.92	38	
U-91-83	MAPLE MEADOW MINING CO.	GEN DEL CANNELTON WV 25036	RALEIGH	MAPLE MEADOW MINE	26.90	20	46-03374
EM-74	MARCUS COAL CO.	BOX 409, GILBERT, WV	WYOMING		5.00	20	46-06080
UO-432	MARCUS COAL CO.	BOX 64, HANOVER, WV 24839	WYOMING		17.00	20	
O-1042-87	MARION DOCKS, INC.	P.O. BOX 667, CLARKSBURG, WV	MARION	MARION DOCKS	3.70	34	46-06904
U-1043-86	MARION FUELS, INC.		HARRISON	MARION FUELS NO. 1	5.00	20	46-05503
S-1039-88	MARK SOUTHERN GEN CONTRACT	RT 1 BOX 309-B FAIRMONT WV 26554	HARRISON	SOUTHERN SURFACE MINE	9.75	10	
S-83-85	MARMET COAL SALES		KANAWHA		25.30	10	
O-42-85	MARMET COAL SALES		KANAWHA		13.00	32	
G-14-85	MARRARA BROTHERS		PRESTON		7.68	34	
S-39-85	MARROWBONE DEV CO/ TRIAD		MINGO	SPRUCE CREEK MINE	632.29	10	46-06089
S-47-82	MARROWBONE DEV CO/TRIAD	PO BOX 119, NAUGATUCK, WV	MINGO		694.00	10	
U-5115-86	MARROWBONE DEV. CO.	PO BOX 119, NAUGATUCK, WV	MINGO	WESTERN MINGO COAL CO.-#2	10.00	20	
S-5032-88	MARROWBONE DEVE. CO.	P.O. BOX 119, NAUGATUCK WV 25685	MINGO	DRAGON SURFACE	953.50	10	46-01827
O-8-85	MARROWBONE DEVELOPMENT	P.O. BOX 119, NAUGATUCK, WV	MINGO		544.32	31	
S-88-84	MARROWBONE DEVELOPMENT	PO BOX 4119, NAUGATUCK, WV	MINGO	BLACKBIRD MINING	42.50	10	46-06089
O 42-83	MARROWBONE DEVELOPMENT CO	PO BOX 117, NAUGATUCK, WV	MINGO		97.34	38	
S-5024-88	MARROWBONE DEVELOPMENT CO	PO BOX 119 NAUGATUCK WV 25685	MINGO	DINGESS TUNNEL MINE #1	583.00	10	
S-45-81	MARROWBONE DEVELOPMENT CO.	P.O. BOX 119 NAUGATUCK WV 25685	MINGO		455.76	10	
U-57-85	MARROWBONE DEVELOPMENT CO.		MINGO	EASTERN MINGO COAL NO. 1	78.00	20	46-05978
U-3016-88	MARSH FORK DEVELOPMENT INC	P.O. BOX 10068, CHARLESTON,WV	RALEIGH	MARSH FORK NO. 1	44.00	20	
S-52-82	MARSOLINA COAL & COKE	PO BOX X, UNIONTOWN, PA	MONONGALIA	MARITTA	11.00	10	
U-70-84	MARSON COAL CO.	PO BOX 142, PICKENS, WV	RANDOLPH	SEWELL NO. 1A	6.30	20	
EM-91	MARSON COAL CO.		RANDOLPH		6.00	20	46-05291
EM-91	MARSON COAL CO.	PO BOX 627, ELKINS, WV	RANDOLPH		6.00	20	
S-33-84	MARSON COAL CO.	BOX 629, ELKINS, WV	RANDOLPH	WINKLER	11.00	10	
EM-44	MARSON COAL CO.	POBOX 142 PICKENS WV 26230	WEBSTER		17.00	20	
1-608	MARSON COAL CO.	BOX 629 ELKINS WV 26241	WEBSTER	TIPPLE	2.00	34	46-05219
U-2027-86	MARSON COAL CO.		RANDOLPH	MARION 5A	15.50	20	
S-2052-86	MARSON COAL CO., INC.	PO BOX 142, PICKENS, WV 26230	RANDOLPH	HICKS RIDGE NO. 1 SM	15.00	10	
S-2021-87	MARSON COAL CO., INC.	PO BOX 157, DAILEY, WV 26259	RANDOLPH	HARTRIDGE # 1, SURFACE	35.90	10	
O-2044-88	MARSON COAL CO., INC.	P.O. BOX 157, DAILEY, WV 26259	RANDOLPH	HARTRIDGE PREP PLANT	18.00	31	
U-2005-88	MARSON COAL COMPANY, INC.	P.O. BOX 157, DAILEY, WV 26259	RANDOLPH	HARTRIDGE DEEP MINE	11.00	20	
S-79-85	MARY ANN COAL CO.		MONONGALIA		26.00	10	
231-76	MARY RUTH	301 MAPLE LN KINGWOOD WV 26537	PRESTON	LOCUST GROVE	80.00	10	46-03726
25-77	MARY RUTH	301 MAPLE LANE KINGWOOD WV	PRESTON	MYERS-INTERSTATE TRACT	125.00	10	46-03726
36-78	MARY RUTH		PRESTON	WILLIAMS-THORN ZETTY	31.00	10	46-03726
O 35-83	MARY RUTH	301 MAPLE AVE KINGWOOD WV 2653	PRESTON		11.00	31	
S-3-81	MARY RUTH	301 MAPLE LANE KINGWOOD WV	PRESTON		69.00	10	46-03726
S-71-83	MARY RUTH	301 MAPLE AVE, KINGWOOD, WV	PRESTON	SHATTER	15.00	10	46-03726
S-1016-86	MARY RUTH CORP.		PRESTON		24.00	10	
S-1039-87	MARY RUTH CORP.	310 MAPLE LN, KINGWOOD, WV	PRESTON	4H-MINE	30.00	10	
S-1015-88	MARY RUTH CORPORATION	301 MAPLE LANE, KINGWOOD, WV 26537	PRESTON	HOME PLACE MINE	84.00	10	
S-1003-89	MARY RUTH CORPORATION	301 MAPLE LANE, KINGWOOD, WV 26537	PRESTON	GLADE FARMS MINE	40.00	10	
S-9-84	MASHUDA CONST. CO.		MONONGALIA	MASHUDAT NO. 31	41.00	10	46-05601
189-76	MASTELLAR COAL CO.	POBOX 370 KEYSER WV 26726	MINERAL	HAMP HILL ST.	78.00	10	46-02570
36-81	MASTELLAR COAL CO.	POBOX 370 KEYSER WV 26726	MINERAL	HAMP HILL ST.	101.00	10	46-02570
84-80	MASTELLAR COAL CO.	P O BOX 370 KEYSER WV	MINERAL		39.00	10	
P-741	MASTELLAR COAL CO.	POBOX 370 KEYSER WV 26726	MINERAL		31.50	31	
S-125-82	MASTELLAR COAL CO.	POBOX 370 KEYSER WV 26726	MINERAL	PINEY SWAMP RUN	49.00	10	46-02570
UO-647	MASTELLAR COAL CO.	PO BOX 370, KEYSER, WV	MINERAL		9.50	20	
S-10-85	MASTELLER COAL CO.	P.O. BOX 370, KEYSER, WV	MINERAL		142.00	10	

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S-2049-86	MASTELLER COAL CO.	PO BOX 370 KEYSER WV 26726	MINERAL	MOON-D STRIP	273.00	10	
U-2045-88	MASTELLER COAL COMPANY	P.O. BOX 370, KEYSER, WV 26726	MINERAL	PINNACLE MINE	10.00	20	
R-5019-87	MATE CREEK ENERGY OF WV	PO BOX 220, RED JACKET, WV 25692	MINGO	NO. 1 OPERATION	13.00	33	
0-5007-88	MATE CREEK ENERGY OF WV	P.O. BOX 343, RED JACKET, WV 25692	MINGO	COAL LOADOUT	24.25	34	46-0748
0-5086-88	MATE CREEK ENERGY OF WV	P.O. BOX 343, RED JACKET, WV 25692	MINGO	HAULROAD NO. 1	6.89	32	
0-5059-86	MATE CREEK LOADING, INC.	PO BOX 88, MATEWAN, WV	MINGO	MATE CREEK LOADOUT	3.50	34	46-0675
S-1058-86	MAURICE JENNINGS		PRESTON		122.00	10	46-0102
S-98-83	MCCLURE'S EXCAVATING, INC.	PO BOX 63, ALKOL, WV 25501	BOONE	OLD STALLION STRIP	135.00	10	46-0554
102-80	MCCOY BROTHERS	POBOX 247 PHILIPPI WV 26416	BARBOUR	WT GEORGE HEIRS	62.00	10	46-0233
111-76	MCCOY BROTHERS	POBOX 247 PHILIPPI WV 26416	BARBOUR	MCCROY BROS. & POLING	12.00	10	46-02339
169-73	MCCOY BROTHERS	POBOX 247 PHILIPPI WV 26416	BARBOUR	MCCROY BROS. INC. TRACT	26.00	10	46-02339
248-74	MCCOY BROTHERS	POBOX 247 PHILIPPI WV 26416	BARBOUR	DICKENSON & YOUNG	60.00	10	46-02339
0-18-84	MCCOY BROTHERS	POBOX 247 PHILIPPI WV 26416	BARBOUR	BEAVER CRK, DICKINSON	2.86	34	46-02339
S-2045-86	MCCOY BROTHERS	PO BOX 247 PHILIPPI, WV 26416	BARBOUR		10.00	10	
S-2016-87	MCCOY BROTHERS, INC.	PO BOX 247, PHILIPPI, WV	BARBOUR	MEADOWVILLE #3	82.20	10	
S-2020-88	MCCOY BROTHERS, INC.	P.O. BOX 247, PHILIPPI, WV 26416	BARBOUR	MEADOWVILLE NO. 4 SURFACE	38.45	10	
266-76	MCDOWELL POCAHONTAS COAL		MCDOWELL		10.00	10	
H-116	MCDOWELL POCAHONTAS COAL	BLUEFIELD, WV	MINGO		50.00	32	
U-33-83	MCELROY COAL CO.	450 RACETRACK RD, WASHINGTO,PA	MARSHALL	MCELROY	77.50	20	
0-3085-67	MCKENZIE SPECIALTY COMPANY	315 SEVENTH ST., RAINELLE, WV 25962	GREENBRIER	QUINWOOD SIDING	2.00	38	
S-104-83	MCNAMEE RESOURCES	-	MINGO	FREEPORT STRIP NO. 2	60.50	10	
EM-96	MEADOW RIVER COAL CO.	ST RT 2, BOX 165, NETTIE, WV	FAYETTE		10.00	20	
P-689	MEADOW RIVER COAL CO.	RT 2 BOX 165 NETTIE WV 26681	FAYETTE		60.50	31	
R-651	MEADOW RIVER COAL CO.		FAYETTE		95.80	33	
S-43-85	MEPCO INC	PO BOX 1206, MORGANTOWN, WV 26505	MONONGALIA		10.00	10	
S-1029-89	MEPCO INC	PO BOX 1206 MORGANTOWN WV 26507	MONONGALIA	BADZEK NO 1 MINE	43.00	10	
S-1034-89	MEPCO, INCORPORATED	PO BOX 1206 MORGANTOWN WV 26505	MONONGALIA	WADES RUN MINE #1	65.00	10	
NONE	MERCURY COAL & COKE		PRESTON		25.00	31	
U-4020-87	MERCY LEASING, INC.	620 FLORENCE ST., MULLENS, WV 25882	WYOMING	MINE NO. 5	3.18	20	46-07357
S-4034-89	MERIDAN OF VIRGINIA, INC	BOX 747 BECKLEY WV 25802	MCDOWELL	MALONE STRIP	144.77		
S-4010-88	MERIDAN OF VIRGINIA, INC.	P.O. BOX 1488, RICHALNDS, VA 24641	MCDOWELL	CRANE CREEK NO. 1	195.05	10	
S-4005-89	MERIDAN OF VIRGINIA, INC.	P.O. BOX 747, BECKLEY, WV 25802	MCDOWELL	MILE BRANCH NO. 1 STRIP	77.42	10	
EM-11	METCO MINING CO.	1510 CHAS. NTL BNK, CHAS., WV	LOGAN		3.00	20	
EM-13	METCO MINING CO.	PO BOX 494, STOLLINGS, WV	LOGAN		5.00	20	
P-730	METCO MINING CO.	PO BOX 1000, STOLLINGS, WV	LOGAN		3.00	31	
UO-463	METCO MINING CO.	1510 CHAS. NTL PLZ, CHAS., WV	LOGAN		3.00	20	
UO-581	METCO MINING CO.	1510 CHRLSTN NATL PLAZA,CHRLST	LOGAN	METCO 5 & 6	10.00	20	46-06526
UO-686	METCO MINING CO.	1510 CHARLST NATL PLAZA,CHRLST	LOGAN	MINE NO 1	5.00	20	46-06389
UO-687	METCO MINING CO.		LOGAN	NO. 7	2.00	20	46-06474
U-1006-86	MIAMI COAL CO., INC.		HARRISON		6.80	20	
41-79	MID SOUTHERN ENERGY		LEWIS	DYER	16.00	10	
S-4020-89	MID-VOL LEASING, INC.	PO BOX 1112 PRINCETON WV 24740	MCDOWELL	ROAD FORK - MONSON STRIP 1	169.80	10	
0-169-83	MILBURN COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	FAYETTE		19.00	31	46-03196
0-170-83	MILBURN COLLIERY CO.	PO BOX 8, BURNWELL, WV 25034	FAYETTE		17.00	33	
S-18-83	MILLER, WAYNE L.	RT 1, BOX 113, BRUCETON MIL,WV	PRESTON	NO. 5	58.00	10	46-04272
0-5037-89	MIN INC	PO BOX 2274 BECKLEY WV 25802-2274	MINGO	GLEN ALUM SURFACE LOADING	70.80	34	
U-5039-88	MIN, INCORPORATED	P.O. BOX 2274, BECKLEY, WV 25601	MINGO	#1, #2, & #3 DEEP MINES	70.00	20	
S-5010-89	MIN, INCORPORATED	PO BOX 2274 BECKLEY WV 25802-2274	MINGO	SIMPKINS BRANCH NO 1	319.00	10	
S-5029-86	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO		263.71	10	
0-26-85	MINGO LOGAN COAL COMPANY	HC71, BOX 1858, WHARNCLIFFE, WV	MINGO		70.70	31	
U-39-85	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	LOW GAP DEEP MINE	29.00	20	
0-5023-86	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO		275.00	38	46-40476
S-5049-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFF WV 25651	MINGO	BEN CREEK SURFACE MINE	143.25	10	
0-5050-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	BEN CREEK PREP PLANT FACIL	41.03	31	
U-5051-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	LOW GAP NO. 1	12.90	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
U-5052-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	LOW GAP NO. 2	28.95	20	
U-5053-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	LOW GAP NO. 3	8.41	20	
U-5077-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	RIFFE BRANCH NO. 1	12.47	20	
U-5078-88	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	RIFFE BRANCH NO. 2	11.66	20	
S-5088-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858 WHARNCLIFFE, WV	MINGO	SURFACE MINE NO. 1	123.60	10	46-06948
U-5089-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	LEFTHAND FORK NO. 1	2.00	20	
U-5090-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	LEFTHAND FORK NO. 2	2.00	20	
S-5070-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	BEN CREEK SURFACE MINE # 2	154.78	10	
U-5071-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	RIDGE NO. 1 DEEP MINE	7.97	20	
U-5072-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	RIDGE NO. 2 DEEP MINE	11.33	20	
U-5073-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	RIDGE NO. 3 DEEP MINE	15.20	20	
U-5074-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	COON RIDGE NO. 1 DEEP MINE	11.75	20	
U-5075-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	COON RIDGE NO. 2 DEEP MINE	16.38	20	
U-5076-88	MINGO LOGAN COAL COMPANY	HC 71, BOX 1858, WHARNCLIFFE, WV	MINGO	COON RIDGE NO. 3 DEEP MINE	11.93	20	
S-5016-89	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	SOUTHEAST RIDGE SURFACE MI	475.80	10	
S-5038-89	MINGO LOGAN COAL COMPANY	HC 71 BOX 1858 WHARNCLIFFE WV 25651	MINGO	POUNDING MILL SURFACE MINE	494.52	10	
UO-155	MOCCASIN MINING CO.	BOX 10066 STATION C CHAS., WV	MCDOWELL		6.00	20	
U-109-83	MOHIGAN MINING CO.		MONONGALIA		7.00	20	
S-1046-86	MON-GO MINING, INC.	RT 4, BOX 138C, MORGANTOWN, WV	MARION	WILSON TRACT	50.96	10	46-07309
U-1031-86	MON-RIVER MINING CORP.	PO BOX 235, MAIDSVILLE, WV	MONONGALIA		10.00	20	46-06647
O-167-83	MON-VALLEY COAL & LUMBER	PO BOX 676, MORGANTOWN, WV	MONONGALIA		5.30	34	
U-25-84	MONTEREY COAL CO.	PO BOX 496, CARLINVILLE, IL 62626	WAYNE	WAYNE MINE	603.00	20	46-05121
S-103-83	MORGANTOWN ENERGY EXPORT	PO BOX 235, MAIDSVILLE, WV	MONONGALIA		33.00	10	46-04737
S-104-82	MORGANTOWN ENERGY EXPORT	PO BOX 235, MAIDSVILLE, WV	MONONGALIA	JOB NO. 1	86.70	10	46-04737
S-45-84	MORGANTOWN ENERGY EXPORT		MONONGALIA		7.00	10	46-04737
S-8-84	MORGANTOWN ENERGY EXPORT	PO BOX 235, MAIDSVILLE, WV	MONONGALIA		52.60	10	46-04737
U-8-83	MORGANTOWN ENERGY EXPORT	PO BOX 235, MAIDSVILLE, WV	MONONGALIA		11.60	20	
O-137-83	MOUNTAIN CARBONH, INC.	BOX 146 HICO, WV 25854	FAYETTE		15.00	34	
D-54-82	MOUNTAIN LAUREL RESOURCES	P.O. DRAWER 711 MT HOPE WV 25880	FAYETTE	SILTEX NO. 2	8.05	20	46-06454
U-19-84	MOUNTAIN LAUREL RESOURCES		RALEIGH		46.59	20	
P-751	MOUNTAIN LAUREL RESOURCES	POBOX 711 MT HOPE WV	SUMMERS		25.70	31	
R-734	MOUNTAIN LAUREL RESOURCES	POBOX 711 MT HOPE WV 25880	SUMMERS	MEADOW CREEK RDA	106.00	33	46-05747
U-225-83	MOUNTAIN MINERALS, INC.	512 CARRIAGE DRIVE BECKLEY WV 25801	FAYETTE		22.00	20	
87-81	MOUNTAIN TOP FUEL	BOX 204, BRIDGEPORT, WV	LEWIS		78.00	10	46-04049
S-79-82	MOUNTAIN TOP FUEL	PO BOX 204, BRIDGEPORT, WV	RANDOLPH		36.03	10	46-04049
135-77	MOUNTAIN TOP FUEL CO.		NICHOLAS	TODD	73.00	10	46-06208
UO-178	MOUNTAINEER FUEL		CLAY	#2	7.00	20	
U-3083-87	MOUNTAINEER FUELS, INC.	RT 1, BX 25-B, SUMMESVILLE, WV	NICHOLAS		10.00	20	46-05208
H-521	MOWER LIMITED PARTNERSHIP	PO BOX 27 DURBIN WV 26264	RANDOLPH		17.30	32	
H-538	MOWER LIMITED PARTNERSHIP	PO BOX 27 DURBIN WV 26264	RANDOLPH		17.00	32	
H-724	MOWER LIMITED PARTNERSHIP	PO BOX 27 DURBIN WV 26264	RANDOLPH		9.80	32	
I-617	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV 26264	RANDOLPH		7.00	34	
UO-475	MOWER LIMITED PARTNERSHIP	PO BOX 27, DURBIN, WV	RANDOLPH	GLADE RUN	11.00	20	46-06262
UO-487	MOWER LIMITED PARTNERSHIP	PO BOX 8 DURBIN WV 26264	RANDOLPH	ENVIRO NO. 2	10.00	20	46-06341
UO-702	MOWER LIMITED PARTNERSHIP	PO BOX 27, DURBIN, WV	RANDOLPH		1.00	20	
UO-726	MOWER LIMITED PARTNERSHIP	PO BOX 8 DURBIN WV 26264	RANDOLPH		14.50	20	
O-168-83	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV 26264	RANDOLPH		9.22	32	
O-67-83	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV 26264	RANDOLPH		28.90	31	
O-88-82	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV 26264	RANDOLPH		43.90	33	
S-29-84	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV	RANDOLPH		184.50	10	
O-30-85	MOWER LIMITED PARTNERSHIP		RANDOLPH		10.00	32	
O-25-85	MOWER LIMITED PARTNERSHIP		RANDOLPH		33.00	32	
U-79-85	MOWER LIMITED PARTNERSHIP		RANDOLPH		18.52	20	
U-2008-86	MOWER LIMITED PARTNERSHIP		RANDOLPH	NEWERA NO. 1	7.80	20	
O-2043-86	MOWER LIMITED PARTNERSHIP	PO BOX 8, DURBIN, WV 26246	RANDOLPH	BARTON KNOB HAULROAD	20.80	32	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
U-2047-86	MT. STORM MINING, INC.		GRANT	WILLIAM T. MOOMAN NO.1	20.00	20	
0-60-82	MTN. LAUREL RESOURCES CO.	DRAWER 711, MT. HOPE, WV 25880	FAYETTE	SILTIX NO 1	21.88	20	46-0129
1-635	MUDDLETY VALLEY COAL		NICHOLAS	MAE TIPPLE	1.00	34	
EM-6	MULLINS COAL CO.	405 CAPITOL ST, CHARLESTON, WV	LOGAN	MINE 02	3.00	20	46-0530
U-31-83	MULLINS COAL CO., INC.	RT 1, BOX 70C, CHAPMANVILLE,WV	BOONE		8.00	20	
U-78-84	MULLINS COAL CO., INC.		BOONE		6.90	20	
U-5072-86	MULLINS COAL CO., INC.		LOGAN	ROY THOMAS MINE	6.50	20	
S-5041-86	MUTUAL MINING INCORPORATED	BOX 640-KY HWY 409 SANDY HOOK KY	LOGAN	29 SOUTH SURFACE MINE	356.00	10	
0-5042-86	MUTUAL MINING INCORPORATED	BOX 640 KY HWY 409 SANDY HOOK KY	LOGAN		14.00	33	
S-5042-88	MUTUAL MINING, INC.	RT 1, BOX 640 SANDY HOOK, KY 41171	LOGAN	FILL NUMBER 1	327.74	10	46-0653
S-1045-86	MYERS COAL CO., INC.		HARRISON	MYERS 81	18.00	10	46-06731
14-75	MYNU COALS INC.		KANAWHA	MOCASSIN HOLLOW	150.00	10	46-0143
100-72	MYNU COALS INC.		NICHOLAS	EIGHT BROTHERS	400.00	10	46-04671
0-5-81	MYSTERY MOUNTAIN COAL	ST RT BOX 207, MEADOR, WV	MINGO		18.00	32	
U-132-83	N & F MINING CO.	PO BOX 507, WV	NICHOLAS	NO. 2	9.53	20	46-06758
S-27-84	N-92 COAL	POBOX 489 GRAFTON WV 26354	BARBOUR		10.00	10	46-06575
S-89-82	N-92 COAL	POBOX 489 GRAFTON WV 26354	BARBOUR	COONTZ NO. 1	83.00	10	46-06595
S-89-84	N-92 COAL	POBOX 489 GRAFTON WV 26354	BARBOUR		15.00	10	
S-58-85	N-92 COAL		TAYLOR		25.10	10	46-06595
S-85-85	N-92 COAL	POBOX 489 GRAFTON WV 26354	BARBOUR		9.60	10	46-06595
0-3014-87	N. F. MINING CO., INC.	PO BOX 507, SUMMERSVILLE, WV	FAYETTE		7.40	31	
S-2004-86	NATIONAL CONSTR. CO., INC		BARBOUR		54.00	10	
EM-45	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING	MINE NO. 51	141.40	20	46-01544
0-115-83	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		9.47	38	
U-142-82	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		5.30	20	
U-168-83	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		1.86	20	
U-169-83	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		4.20	20	
U-199-83	NATIONAL MINES CORP.	PO BOX 760, PINEVILLE, WV	WYOMING	NO. 78	1.42	20	
U-203-83	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		2.00	20	
U-39-84	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		3.48	20	
UO-213	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		5.00	20	
UO-385	NATIONAL MINES CORP.	PO BOX 760, PINEVILLE, WV	WYOMING		39.63	20	
UO-479	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		6.39	20	
UO-716	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING	NO. 74	3.80	20	46-0168
UO-735	NATIONAL MINES CORP.	PO BOX 960, PINEVILLE, WV	WYOMING		5.60	20	
UO-360	NATIONAL MINES CORPORATION	P.O. BOX 960, PINEVILLE, WV 24874	WYOMING	MINE NO. 1	5.83	20	46-0598
UO-453	NATIONAL MINES CORPORATION	PO DRAWER 960, PINEVILLE WV 24874	WYOMING		10.62	20	46-05939
S-4017-88	NATIONAL MINES CORPORATION	PO BOX 960, PINEVILLE, WV 24874	WYOMING	WALLACE CABIN BRANCH STRIP	20.00	10	
U-4028-88	NATIONAL MINES CORPORATION	P.O. BOX 960, PINEVILLE, WV 24874	WYOMING	WALLACE CABIN NO. 1	2.00	20	
U-4030-88	NATIONAL MINES CORPORATION	P.O. BOX 960, PINEVILLE, WV 24874	WYOMING	WALLACE CABIN NO. 3	2.00	20	
U-4004-89	NATIONAL MINES CORPORATION	P.O. BOX 960, PINEVILLE, WV 24874	WYOMING	SHAFT HOLLOW NO. 1	5.03	20	46-05144
UO-421	NATIONAL MINES CORPORATION	BOX 960 PINEVILLE, WV 24874	WYOMING		9.00	20	
S-1016-89	NEPCO, INCORPORATED	PO BOX 1206 MORGANTOWN WV 26507	MONONGALIA	SOLOMON TRACT	53.94	10	
S-2028-88	NESCO, INC.	P.O. BOX 1008, FAIRMONT, WV 26554	BARBOUR	COVE SITE	121.00	10	
U-127-83	NEW BECKLEY MINING CORP.	P.O. BOX 145, GLEN DANIEL, WV	RALEIGH		133.00	20	
53-81	NEW LAND LEASING CO., INC.		NICHOLAS		453.00	10	
S-57-82	NEW LAND LEASING CO., INC.	BOX 2277, BECKLEY, WV 25802	NICHOLAS		91.00	10	46-0667
S-53-83	NEW LAND LEASING CO., INC.	BOX 309, SUMMERSVILLE, WV	WEBSTER	SURFACE	48.00	10	46-06687
S-64-84	NEW LAND LEASING CO., INC.	PO BOX 2243, BECKLEY, WV	WEBSTER		83.00	10	46-06687
S-94-84	NEW LAND LEASING CO., INC.		WEBSTER	NO. 2	76.00	10	46-06687
S-3039-88	NEW LAND LEASING CO., INC.	P.O. BOX 2243, BECKLEY, WV 25602	NICHOLAS	ELLER, INC.	779.00	10	
S-3071-88	NEW LAND LEASING CO., INC.	P.O. BOX 2243, BECKLEY, WV 25802	WEBSTER	TAMMIE LYNN NO. 2	215.47	10	
S-29-82	NEWERA RESOURCES	PO BOX 8, DURBIN, WV	RANDOLPH		350.00	10	
UO-749	NICHOLAS ENERGY CORP.		NICHOLAS		26.00	20	
62-80	NIX MINING COMPANY	PO BOX 359 FAYETTEVILLE WV 25840	NICHOLAS	JOB 6	354.00	10	46-06161

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA ID
S-29-85	NIX MINING COMPANY	PO BOX 359, FAYETTEVILLE, WV 25840	NICHOLAS		29.00	10	
S-1010-88	NOGATCO, INC.	P.O. BOX 584, KINGWOOD, WV 26537	PRESTON	CASTLE - ELLIOTT	23.00	10	
O-22-83	NORTH MARION DEV., INC.	KOPPERS BLDG. PITTS. PA 15219	MARION	JOANNE PREP. PLANT	12.00	31	
O-3-83	NORTH MARION DEV., INC.	KOPPERS BLDG. PITTS. PA 15219	MARION	JOANNE AMD	10.00	33	
U-22-83	NORTH MARION DEV., INC.	KOPPERS BLDG., PITTSBURGH, PA	MARION	JOANNE MINE	8.00	20	
268-75	NORTH PAGE COAL CORP.	800 LAIDLEY TWR, CHARLESTON,WV	FAYETTE		127.00	10	
U-67-85	NORTH PAGE COAL CORP.		FAYETTE	EAGLE NO. 1 AND NO. 2	16.00	20	
S-115-85	NORTH PAGE COAL CORP.		FAYETTE		170.00	10	
O-151-83	NORTHLAND RESOURCES CO.	PO BOX 649, DELBARTON, WV	MINGO		35.66	33	
O-156-83	NORTHLAND RESOURCES CO.	PO BOX 649, DELBARTON, WV	MINGO		16.25	31	
UO-90	NORTHLANDS RESOURCES, INC.	PO BOX 649, DELBARTON, WV	MINGO		6.60	20	
U-5055-89	NORTHRIDGE MINING COMPANY	P.O. BOX 500 SETH WV 25181	BOONE	WYNCHESTER NO 1	21.00		
27-81	NOTOMINE COMPANY	13905 MCCKLE AVE CHESAPEAK WV	KANAWHA	LONG BRANCH MINE	1000.00	10	46-06290
H-599	NOTOMINE COMPANY	13905 MCCORKLE AV CHESAPEAK WV	KANAWHA	NO. 29 MINE HAULROAD	36.00	32	46-03834
U-6023-86	NOTOMINE COMPANY	13905 MACCORKLE AVE., CHESAPEAKE,WV	KANAWHA	NO. 80 MINE	17.43	20	
O-6002-86	NU-EAST MINING CORP.		KANAWHA	COLLINS BRANCH ACCESS RD	15.00	32	
P-677	NU-WAY MINING	POBOX 2150 CLARKSBURG WV 26302	HARRISON		14.00	31	
100-80	NU-WAY MINING	PO BOX 670, WESTON, WV 26452	LEWIS	ROB NO. 2	112.00	10	46-04497
79-81	NU-WAY MINING	PO BOX 670, WESTON, WV 26452	LEWIS	ROB NO. 3	69.00	10	46-04497
P-738	NUEAST MINING CORP.		KANAWHA	MORRIS CREEK PREP PLANT	37.00	31	46-02234
S-6036-86	NUEAST MINING CORP.	P.O. BOX 57, CABIN CREEK, WV 25035	KANAWHA	LONGBOTTOM NO. 1	620.00	10	
O-99-82	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA	BLACKROSE	13.40	20	46-03203
H-66	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		20.00	32	
I-627	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		6.50	36	
I-660	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		9.30	36	
S-30-82	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		466.00	10	
H-245	NUEAST MINING CORP.		KANAWHA	RIDGE ROAD HAULROAD	50.00	32	46-03299
H-354	NUEAST MINING CORP.		KANAWHA		35.00	32	
EM-64	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA		18.00	20	
100-79	NUEAST MINING CORP.		BOONE		205.00	10	
103-80	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE	CUT 24	172.00	10	46-07407
16-77	NUEAST MINING CORP.	ONE PPG PLACE, PITTS, PA	BOONE		88.00	10	
193-77	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE	CUT 24	244.00	10	46-06447
O-31-82	NUEAST MINING CORP.	1 PPG PLACE, PITTS., PA	BOONE		13.60	20	
O-51-81	NUEAST MINING CORP.	PO BOX 57, CABIN CREEK, WV	BOONE	TWIN POPULAR SLOPE	3.50	20	
O-587	NUEAST MINING CORP.	ONE PPG PLACE PITB,PA	BOONE		39.00	32	46-04194
EM-99	NUEAST MINING CORP.	PO BOX 57, CABIN CREEK, WV	BOONE		26.25	20	
H-104	NUEAST MINING CORP.		BOONE		20.61	32	
H-370	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE	BIG WHITE OAK	22.00	32	
H-379	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		40.00	32	
H-424	NUEAST MINING CORP.		BOONE	PASS HAULROAD	30.00	32	46-07047
I-17	NUEAST MINING CORP.		BOONE		16.00	20	
O-16-83	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE	WHITE OAK PREP PLANT	37.00	31	46-05584
O-21-82	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE	CUT 26 HAULROAD	53.30	32	46-06447
O-753	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	BOONE		103.00	33	
S-102-83	NUEAST MINING CORP.	PO BOX 57, CABIN CREEK, WV	BOONE	CUT 26 EXT	71.00	10	46-04194
UO-704	NUEAST MINING CORP.	1 PPG PLACE, PITTS., PA	BOONE		11.00	20	
UO-739	NUEAST MINING CORP.	1 PPG PLACE, PITTS., PA	BOONE		38.00	20	
197-77	NUEAST MINING CORP.		KANAWHA		115.00	10	
EM-43	NUEAST MINING CORP.	2800 1 PPG PLACE, PITTS., PA	KANAWHA		18.00	20	
EM-46	NUEAST MINING CORP.	2800 1 PPG PLACE, PITTS., PA	KANAWHA		6.20	20	
H-346	NUEAST MINING CORP.		KANAWHA		10.00	32	
H-381	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA		12.00	32	
H-389	NUEAST MINING CORP.		KANAWHA		35.00	32	
H-397	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA	-	10.00	32	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
P-646	NUEAST MINING CORP.		KANAWHA	CHELYAN PREP PLANT	14.00	31	46-0419
S-31-83	NUEAST MINING CORP.		KANAWHA	CUT 20	350.00	10	46-0662
U-64-83	NUEAST MINING CORP.	ONE PPG PLACE, PITTS, PA	KANAWHA	STOCKBURG NO 2	19.00	20	
U-80-83	NUEAST MINING CORP.		KANAWHA	STOCKBURG NO 1	17.00	20	
UO-642	NUEAST MINING CORP.	ONE PPG PLACE, PITTS., PA	KANAWHA		11.00	20	
R-742	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA	FITZGERALD BRANCH ROA	96.00	33	46-0419
218-75	NUEAST MINING CORP.		BOONE	CUT 22	80.00	10	46-0419
38-80	NUEAST MINING CORP.	ONE PPG PLACE, PITTS, PA	BOONE	CUT 22	237.00	10	46-0419
268-76	NUEAST MINING CORP.		KANAWHA	CUT 23	110.00	10	46-0240
38-76	NUEAST MINING CORP.		KANAWHA	CUT 21	150.00	10	46-0240
7-74	NUEAST MINING CORP.		KANAWHA	CUT 21	40.00	10	46-0240
78-79	NUEAST MINING CORP.		KANAWHA	CUT 21	170.00	10	46-0240
1-81	NUEAST MINING CORP.	PO BOX 57, CABIN CREEK, WV	KANAWHA	EASTERN ASSOC.	44.00	10	46-0419
141-79	NUEAST MINING CORP.	2800 ONE PPG PLACE, PITTS., PA	KANAWHA	MORRIS CREEK	220.00	10	46-0419
UO-345	NUEAST MINING CORP.	PO BOX 57, CABIN CREEK, WV	KANAWHA		27.00	20	
EM-81	NUEAST MINING CORP.		BOONE		2.00	20	
0-49-85	NUEAST MINING CORP.		KANAWHA		11.40	34	46-0329
S-6015-86	NUEAST MINING CORP.	800 LAIDLEY TWR, CHARLESTON,WV	KANAWHA		399.76	10	
S-6006-86	NUEAST MINING CORP.	800 LAIDLEY TWR,CHARLESTON, WV	BOONE		135.40	10	
S-97-85	OAK HILL EXCAVATING		NICHOLAS		16.00	10	
S-3011-87	OAK HILL EXCAVATING, INC.	PO BOX 1352, OAK HILL, WV	NICHOLAS	SURFACE MINE # 2	15.00	10	
S 3059-88	OAK HILL EXCAVATING, INC.	P.O. BOX 1352, OAK HILL, WV 25901	NICHOLAS	SURFACE MINE NO. 3	39.00	10	
R-5054 86	OGLEBAY NORTON CO.		WAYNE		52.00	33	
U-226-83	OLD BEN COAL CO.	ST RT BOX 25d, MEADOR, WV	MINGO	MINE NO. 20	195.40	20	46-0205
UO-467	OLD BEN COAL CO.	ST ROUTE BOX 25D, MEADOR, WV	MINGO		10.40	20	
U-33-85	OLGA COAL CO		MCDOWELL	CARETTA NO. 4	9.50	20	46-0235
0-42-84	OLGA COAL CO.	DRAWER B, COALWOOD, WV	MCDOWELL		26.00	33	
0-10-84	OLGA COAL CO.	DRAWER B, COALWOOD, WV	MCDOWELL	BARRENSHUE BR. DUMP	100.00	33	46-024
0-173-83	OLGA COAL CO.	DRAWER B, COALWOOD, WV 24824	MCDOWELL	PREP PLANT	66.00	31	46-024
0-25 84	OLGA COAL CO.	GEN. DEL., COALWOOD, WV	MCDOWELL		90.00	33	
U-163-83	OLGA COAL CO.	DRAWER B, COALWOOD, WV 24824	MCDOWELL		26.00	20	
U-164-83	OLGA COAL CO.	DRAWER B, COALWOOD, WV 24824	MCDOWELL		13.35	20	
U-69-83	OLGA COAL CO.	DRAWER B, COALWOOD, WV	MCDOWELL		17.00	20	
U-76-85	OMAR MINING		BOONE	CHESTERFIELD NO. 16 MINE	2.10	20	
D-22-82	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		16.00	20	
D-70-82	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		2.00	20	
EM-49	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		6.70	20	
EM-50	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE	CHESTERFIELD NO. 5	12.40	20	46-01791
EM-51	OMAR MINING CO.		BOONE		28.40	20	46-01275
EM-52	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		3.00	20	
EM-53	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		3.00	20	
H-212	OMAR MINING CO.	POBOX 338 MADISON WV 25130	BOONE		17.00	32	46-03141
H-396	OMAR MINING CO.	POBOX 338 MADISON WV 25130	BOONE		6.00	32	46-02040
P-648	OMAR MINING CO.	POBOX 338 MADISON WV 25130	BOONE	CHESTERFIELD PLANT	241.00	31	46-03141
U-21-84	OMAR MINING CO.		BOONE		5.50	20	
U-8-84	OMAR MINING CO.		BOONE		3.53	20	
UO-106	OMAR MINING CO.	PO BOX 338, MADISON, WV 25130	BOONE		3.40	20	
UO-191	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		10.00	20	
UO-403	OMAR MINING CO.	PO BOX 338, MADISON, WV	BOONE		8.80	20	
S-5075-86	OMAR MINING CO.		BOONE	COON HOLLOW COMPLEX	400.00	10	
U-5009-87	OMAR MINING CO.	PO BOX 338, MADISON, WV 25130	BOONE		9.20	20	
S-5023-87	OMAR MINING COMPANY	PO BOX 338, MADISON, WV	BOONE	CHESTERFIELD SURFACE MINE	293.44	10	
0-5095-88	OMAR MINING COMPANY	P.O. BOX 338, MADISON, WV 25130	BOONE	RIDGETOP HAULWAY	87.34	32	
0-79-82	OMEGA MINING CO.	PO BOX 3186, MORGANTOWN, WV	MONONGALIA	OMEGA MINE 100	17.00	20	46-06470
S-15-84	OMEGA MINING CO.	PO BOX 3186, MORGANTOWN, WV	MONONGALIA	OMEGA STRIP NO. 1	60.60	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA #
U-4010-80	OMEGA SQUARE	BOX 945, TAZEWELL, VA 24651	MCDOWELL	MINE NO. 1	10.90	20	
D-47-81	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV 26601	BRAXTON		81.00	20	
D-7-82	ONEIDA COAL CO., INC.	RT 2 BOX 72 SUTTON WV 26601	BRAXTON		36.40	20	
P-585	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		29.80	31	
R-720	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV 26601	BRAXTON		227.00	33	46-06766
S-71-85	ONEIDA COAL CO., INC.		WEBSTER		149.40	10	46-06766
H-471	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		170.00	32	
H-505	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		70.50	32	
I-449	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		0.70	34	
I-482	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		7.90	34	
I-563	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		15.40	10	
O-37-84	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		62.20	33	
P-526	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		25.00	31	46-06213
R-525	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		25.00	33	
R-620	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		47.50	33	
UO-359	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV 26601	BRAXTON		17.64	20	
UO-524	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON		10.80	20	
UO-620	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV 26601	BRAXTON		32.80	20	
S-2004-87	ONEIDA COAL CO., INC.	RT 2, BOX 72, SUTTON, WV	BRAXTON	LITTLE BIRCH NO. 1	130.00	10	
U-2016-89	ONEIDA COAL COMPANY INC	RT 2 BOX 72 SUTTON WV 26601	WEBSTER	ONEIDA MINE NO 16	10.00	20	
D-46-82	ONEIDA COAL COMPANY, INC.	RT 2, BOX 72, SUTTON, WV 26601	WEBSTER		16.70	20	
O-120-63	ORCHARD COAL CO.	PO BOX 1065, BECKLEY, WV	RALEIGH	CRAB ORCHARD TIPPLE	10.00	34	46-04734
33-80	ORLANDO COALS		GILMER	KANAWHA NO. 3	84.40	10	
UO-346	ORLANDO COALS		GILMER		8.50	20	
O-5026-87	P & C "BITUMINOUS COAL"	PO BOX 532, CATLETTSBURG, KY	WAYNE		55.57	38	46-0732
S-5027-87	P & C "BITUMINOUS COAL"	PO BOX 532, CATLETTSBURG, KY	WAYNE	HONEY BRANCH OPERATION	437.99	10	46-0372
O-5028-87	P & C "BITUMINOUS COAL"	PO BOX 532, CATLETTSBURG, KY	WAYNE	HONEY BRANCH OPERATION	10.00	38	
U-5029-87	P & C "BITUMINOUS COAL"	PO BOX 532, CATLETTSBURG, KY	WAYNE	HONEY BRANCH OPERATION	12.80	20	
U-5030-87	P & C "BITUMINOUS COAL"	PO BOX 532, CATLETTSBURG, KY	WAYNE	HONEY BRANCH OPERATION	10.30	20	
S-5024-89	P & C "BITUMINOUS COAL"	P.O. BOX 532 CATLETTSBURG KY 41127	WAYNE	PARKER-BLUEWATER OPERATION	427.02		
O-5023-89	P & C "BITUMINOUS COAL"	P.O. BOX 532 CATLETTSBURG KY 41129	WAYNE	PARKER-BLUEWATER OPERATION	32.41		
O-5097-88	P & C "BITUMINOUS COAL" CO	PO BOX 532 CATLETTSBURG KY 41129	WAYNE		101.39	33	
O-5098-88	P & C "BITUMINOUS COAL" CO	PO BOX 532 CATLETTSBURG KY 41129	WAYNE		11.73	33	
U-5099-88	P & C "BITUMINOUS COAL" CO	PO BOX 532 CATLETTSBURG KY 41129	WAYNE		22.10	20	
U-5100-88	P & C "BITUMINOUS COAL" CO	PO BOX 532 CATLETTSBURG KY 41129	WAYNE		10.10	20	
S-5015-89	P & C BITUMINOUS COAL INC	P.O. BOX 532, CATLETTSBURG, KY	WAYNE	DEVILSTRACE SURFACE MINE	186.96	10	
O-5014-89	P & C BITUMINOUS COAL INC	P.O. BOX 532, CATLETTSBURG, KY	WAYNE		16.70	38	
S-6038-86	P & S COAL CO., INC.	PLEASANT VALLEY RD, GIVEN, WV	KANAWHA	LAUREL FORK CONTOUR	56.00	10	
U-6024-88	P & S COAL COMPANY, INC.	PLEASANT VALLEY RD., GIVEN,WV 25245	KANAWHA	LAUREL FORK NO. 1	15.77	20	
S-6003-89	P & S COAL COMPANY, INC.	PLEASANT VALLEY RD GIVEN WV 25245	KANAWHA	MORRIS FORK NO 1	222.56	10	
O-112-83	P G & H INC.	POBOX 39 DRY BRANCH WV 25061	KANAWHA		14.98	31	
O-2-82	P G & H INC.	POBOX 39 DRY BRANCH WV 25061	KANAWHA		30.13	33	
UO-172	P G & H INC.	PO BOX 39, DRY BRANCH, WV	KANAWHA	NUMBER 3 MINE	9.26	20	46-05669
UO-184	P G & H INC.	PO BOX 39, DRY BRANCH, WV	KANAWHA	MINE NO. 4	6.00	20	46-05670
UO-351	P G & H INC.	PO BOX 39, DRY BRANCH, WV	KANAWHA	MINE NO. 5	9.00	20	46-05671
UO-391	P G & H INC.	PO BOX 39, DRY BRANCH, WV	KANAWHA	NO. 2	9.93	20	46-05437
O-81-82	P S B MINING COMPANY	P.O. BOX 401, MATEWAN, WV 25678	MINGO	NO 6 MINE	2.62	20	46-06604
O-18-82	P S B MINING COMPANY	P.O. BOX 401, MATEWAN, WV 25678	MINGO		16.80	32	
O-5041-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA, KY 41230	WAYNE	CYRUS DOCK, INC.	22.19	34	
O-5083-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	92.97	38	
S-5084-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	910.24	10	
O-5085-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	14.90	38	
U-5086-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	14.00	20	
U-5087-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	10.00	20	
U-5088-87	P&C "BITUMINOUS COAL" INC.	P.O. BOX 770, LOUISA,KY 41230	WAYNE	FRANK-MAYNARD BRANCH	15.80	20	

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S-5045-88	P&C "BITUMINOUS" COAL, INC	P.O. BOX 532, CATLETTSBURG, KY	WAYNE	OPEN FORK MINE	446.00	10	
S-5092-88	P&C BITUMINOUS COAL, INC.	P.O. BOX 532, CATLETTSBURG, KY	WAYNE		164.63	10	
R-3029-86	P.C.R.		FAYETTE		10.00	33	
60-81	P.P.G. & A ENTERPRISES		RALEIGH		17.00	10	
S-26-83	PAINT CREEK COAL CO.	RT 1, BOX 264-D, MT. HOPE, WV	FAYETTE		92.58	10	46-0426
S-3010-89	PAINT CREEK COAL COMPANY	RT 1 BOX 264-D MT. HOPE WV 25880	FAYETTE	SURFACE MINE #2	106.00	10	
S-3023-89	PAINT CREEK COAL COMPANY	RT. 1, BOX 264-D, MOUNT HOPE, WV	FAYETTE	SURFACE MINE NO. 3	75.00	10	
I-592	PAINT CREEK TERMINALS INC	PO BOX 190, HANSFORD, WV 25103	KANAWHA	COALBURG TIPPLE	3.18	34	46-0538
I-601	PAINT CREEK TERMINALS INC	PO BOX 175, HANSFORD, WV 25103	KANAWHA		4.89	34	
UO-631	PAMALID COAL CO.	BOX 303, BIRCH RIVER, WV	BRAXTON		6.00	20	
UO-511	PARSLEY BRANCH COAL CO	PO BOX 117, NAUGATUCK, WV	MINGO		16.00	20	
148-79	PATRIOT MINING CO.		PRESTON		181.90	10	46-0604
82-80	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON	GERASIMOVICH	153.00	10	46-0604
96-80	PATRIOT MINING CO.	PO BOX 3320, MORGNTOWN, WV	PRESTON		14.50	10	46-0604
O-114-83	PATRIOT MINING CO.	PO BOX 3320, MORGANTOWN, WV	PRESTON		1.90	35	
O-23-84	PATRIOT MINING CO.	PO BOX 3320, MORGANTOWN, WV	PRESTON		37.00	32	46-0604
P-504	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON		11.20	31	
S-119-82	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON		267.00	10	46-0604
S-12-81	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON	PINE TOP	50.00	10	46-0604
S-14-82	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON		38.00	10	46-0604
S-9-81	PATRIOT MINING CO.	POBOX 3320 MORGANTOWN WV 26505	PRESTON	PLEASANT	181.00	10	46-0604
S [illegible] 84	PATRIOT MINING CO.		PRESTON	KANES CREEK	57.24	10	46-0604
U 87 84	PATRIOT MINING CO.		PRESTON		47.00	20	
O-28-84	PATRIOT MINING CO.		PRESTON		28.10	36	
O-1012-86	PATRIOT MINING CO., INC.	PO BOX 3320 MORGANTOWN WV	PRESTON		56.30	33	46-0604
U-1011-86	PATRIOT MINING CO., INC.		PRESTON	STACKS RUN DEEP MINE	10.00	20	
S-1029-87	PATRIOT MINING CO., INC.	RT 12, BOX 245, MORGANTOWN, WV	PRESTON		29.00	10	46-0604
U-1017-89	PATRIOT MINING CO., INC.	PO BOX 887 MORGANTOWN WV 26507	MARION		32.00	20	
S-40-85	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA		40.00	10	
117-75	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	MCKENNEY & DIPPEL	75.00	10	46-0306
16-80	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	WALNUT LANE	115.00	10	46-0306
17-80	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN WV 26505	MONONGALIA	BARKER	68.00	10	46-0306
55-80	PATRIOT MINING COMPANY INC	ROUTE 12, BOX 245 MORGANTOWN 26505	MONONGALIA	BETHEL MINE	19.00	10	46-0306
58-76	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	CHISLER NO. 2	75.00	10	46-0306
77-81	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	ANSLINE - STRAIGHT	70.00	10	46-0306
80-80	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	DIPPEL DARWIN CORP.	76.99	10	46-0306
[illegible]-77	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	WALNUT LANE	62.80	10	46-0306
O-66-83	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN WV 26505	MONONGALIA		3.00	34	
S-114-82	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	100 PERMITS	28.00	10	46-0306
S-94-83	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	HENRY - LEMLEY-KERNS	63.00	10	46-0306
O-34-85	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN WV 26505	MONONGALIA		58.00	38	46-0306
S-1028-88	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA	CHAPLIN	17.00	10	
S-1020-88	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN, WV 26505	MONONGALIA		33.00	10	
S-1022-88	PATRIOT MINING COMPANY INC	RT 12 BOX 245 MORGANTOWN WV 26505	PRESTON	BIRDS CREEK MINE	129.00	10	
S-1033-89	PATRIOT MINING COMPANY INC	ROUTE 12 BOX 245 MORGANTOWN WV 2650	PRESTON	SMITH MINE	36.00	10	
U-1041-86	PATRIOT MINING, INC.		PRESTON	SQUIRES CREEK NO. 2	16.00	20	
S-1013-89	PATRIOT MINING, INCORPORAT	RT. 12 BOX 245 MORGANTOWN WV 26505	PRESTON	ALBRIGHT MINE	47.00	10	
115-79	PAUL HAROLD	RT 1, WOLF SUMMIT, WV 26462	HARRISON	NO. 1	63.00	10	46-0434
S-81-83	PAVEX	PO BOX 83, PROSPERITY, WV	RALEIGH	CRAB ORCHARD	10.00	10	46-0653
S-91-82	PAVEX	BOX 83, PROSPERITY, WV	RALEIGH	CRAB ORCHARD	13.80	10	46-0653
O-172-83	PAX MINING COMPANY	PO BOX 359, FAYETTEVILLE WV 25840	FAYETTE		6.00	34	
R-5-84	PAX MINING COMPANY	PO BOX 359, FAYETTEVILLE WV 25840	WYOMING		34.00	33	
S-3021-86	PAX MINING COMPANY	P.O. BOX 359, FAYETTEVILLE WV 25840	FAYETTE	PAX SURFACE MINE	80.00	10	46-06
S-3015-89	PAX MINING COMPANY	RT 2 BOX 69B, FAYETTEVILLE WV 25340	FAYETTE/RA	PAX NO. 3	186.10	10	
O-3014-89	PAX MINING COMPANY	RT 2 BOX 69B FAYETTEVILLE WV 25340	FAYETTE		23.60		

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U-5076-86	PAYBRA MINING CO., INC.		LOGAN	B 24/25 MINE	10.00	20	
S-57-85	PAYBRA MINING CO., INC.		WYOMING		414.80	10	46-07020
S-4004-86	PAYBRA MINING CO., INC.		WYOMING		340.60	10	
U-4020-88	PAYBRA MINING CO., INC.	P.O. BOX 438, MAN, WV 25635	WYOMING	DEEP MINE NO. 2 & 3	7.00	20	
U-4034-86	PAYBRA MINING COMPANY	P.O. BOX 488, MAN, WV 25635	WYOMING	D-26	10.00	20	
R-3052-86	PCR JOINT VENTURE		FAYETTE	SUN REFUSE AREA	7.60	33	
R-3077-86	PCR JOINT VENTURE	PO BOX 90 GLEN JEAN WV 25846	RALEIGH		43.39	33	
R-3044-88	PCR JOINT VENTURE	P.O. BOX 90, GLEN JEAN, WV 25846	RALEIGH	SLAB FORK REPROCESSING	39.00	38	
R-3004-86	PCR JOINT VENTURE	P.O. BOX 90, GLEN JEAN, WV 25846	FAYETTE		13.00	33	
R-3011-89	PCR JOINT VENTURE	P.O. BOX 90, GLEN JEAN, WV 25846	RALEIGH	SLAB FORK REPROCESSING	24.31	38	
O-18-85	PEABODY COAL CO		RALEIGH		94.00	33	
S-37-85	PEABODY COAL CO		BOONE		104.00	10	
144-79	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25324	BOONE	NO. 25	106.00	10	46-04469
147-79	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25324	BOONE	NO. 25	150.00	10	46-04469
173-73	PEABODY COAL CO.		BOONE		225.00	10	46-02512
274-70	PEABODY COAL CO.		BOONE		30.00	10	
6-75	PEABODY COAL CO.	1018 KAN BLVD E BOX 1233 CHAS,	BOONE		134.00	10	46-02512
D-43-82	PEABODY COAL CO.	1018 KANAWHA BLVD,E,CHAS., WV	BOONE	NO 1 MINE	35.20	20	46-03829
D-65-82	PEABODY COAL CO.	1018 KANAWHA BLVD,E, CHAS., WV	BOONE	BIG MOUNTAIN 83	36.78	20	46-05425
D-92-82	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	BOONE		14.92	20	
H-6	PEABODY COAL CO.	P.O.BOX 1233, CHARLESTON, WV	BOONE		106.00	32	
H-8	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 15334	BOONE		20.00	32	
O-14-83	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25334	BOONE		28.60	38	
O-28-82	PEABODY COAL CO.	1018 KANAWHA BLVD, E, CHAS.,WV	BOONE		21.50	38	
O-69-83	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25334	BOONE		365.80	38	
O-76-82	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25324	BOONE		229.67	38	
S-96-84	PEABODY COAL CO.	PO BOX 188, MONTCOAL, WV	BOONE	MINE NO. 25	29.00	10	46-14469
UO-498AO	PEABODY COAL CO.		BOONE		1.00	20	
143-79	PEABODY COAL CO.		RALEIGH		104.00	10	
145-79	PEABODY COAL CO.		RALEIGH	NO. 25	205.00	10	
D-114-82	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH		46.01	20	
D-2-82	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH		14.60	20	
D-66-82	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH		122.44	20	
EM-38	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH		37.30	20	
H-478	PEABODY COAL CO.	POBOX 1233	RALEIGH		31.00	32	
O-48-82	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 15324	RALEIGH		25.00	38	
U-13-83	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH		263.05	20	
UO-498	PEABODY COAL CO.	POBOX 1233 CHARLESTON WV 25324	RALEIGH		34.36	20	
U-3060-87	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	RALEIGH	HAZY CREEK NO. 2 GAS MINE	15.80	20	
U-5048-87	PEABODY COAL CO.	PO BOX 1233, CHARLESTON, WV	BOONE	WINIFREDE 8 MINE	8.30	20	
U-9-83	PEABODY COAL COMPANY	PO BOX 1233, CHARLESTON, WV 25324	BOONE		43.90	20	46-02143
U-5004-88	PEABODY COAL COMPANY	P.O. BOX 1233, CHARLESTON, WV 25324	BOONE	MATIS CREEK SHAFTS	78.50	20	
U-6010-88	PEABODY COAL COMPANY	P.O. BOX 1233, CHARLESTON, WV 25324	BOONE	HOPKINS FORK PORTAL	67.90	20	
S-6013-89	PEABODY COAL COMPANY	PO BOX 1233 CHARLESTON WV 25324	BOONE	CHESTNUT HOLLOW SURFACE	61.00		
UO-209	PEAK COAL CO.		RANDOLPH	NO. 1	9.10	20	
S-7-82	PEAKER RUN COAL CO.	PO BOX 631, WEBSTER SPRINGS,WV	WEBSTER	PANTHER LICK	37.00	10	46-06259
S-105-85	PEAKER RUN COAL CO.	PO BOX 631, WEBSTER SPRINGS,WV	WEBSTER		15.30	10	
S-3008-89	PEERLESS EAGLE COAL CO	P.O. BOX 488 SUMMERSVILLE WV 26651	NICHOLAS	ENOCH BRANCH SURFACE NO 1	127.50	10	
U-3025-89	PEERLESS EAGLE COAL CO INC	BOX 488 SUMMERSVILLE WV 26651	NICHOLAS	NO 14 DEEP MINE	8.88	20	
O-21-84	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS		86.00	33	
O-41-83	PEERLESS EAGLE COAL CO.	POBOX 488 SUMMERSVILLE WV	NICHOLAS		56.70	38	46-02265
O-88-83	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS		13.00	33	
U-36-84	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS		20.00	20	
U-41-84	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS	NO. 3	12.00	20	46-03851
U-66-84	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS		5.77	20	

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U-67-84	PEERLESS EAGLE COAL CO.	PO BOX 488, SUMMERSVILLE, WV	NICHOLAS		6.20	20	
U-89-84	PEERLESS EAGLE COAL CO.		NICHOLAS		13.35	20	46-01616
U-3011-86	PEERLESS EAGLE COAL CO.		NICHOLAS	MINE NO. 9	10.00	20	
O-3012-86	PEERLESS EAGLE COAL CO.	PO BOX 488 SUMMERSVILLE, WV	NICHOLAS	ROCKCAMP BRANCH REFUSE	84.00	33	
O-3056-86	PEERLESS EAGLE COAL CO.		NICHOLAS	COAL YARD	12.00	38	46-07250
H-143	PEERLESS EAGLE COAL CO.	P.O. BOX 488, SUMMERSVILLE, WV	NICHOLAS		6.00	32	46-02289
U-3030-88	PEERLESS EAGLE COAL CO.	P.O. BOX 488, SUMMERSVILLE, WV	NICHOLAS	MINE #10	15.00	20	
S-3064-88	PEERLESS EAGLE COAL CO.	P.O. BOX 488, SUMMERSVILLE, WV	NICHOLAS	PINE RUN SURFACE MINE	68.80	10	
U-3074-88	PEERLESS EAGLE COAL CO.	P.O. BOX 488, SUMMERSVILLE, WV	NICHOLAS	MUDDLETY #1	4.80	20	
U-3075-88	PEERLESS EAGLE COAL CO.	P.O. BOX 488, SUMMERSVILLE, WV	NICHOLAS	MUDDLETY #2	9.40	20	
O-3005-89	PEERLESS EAGLE COAL CO.	PO BOX 488 SUMMERSVILLE WV 26651	NICHOLAS	ENOCH BRANCH HAULROAD	10.00	32	
U-3004-89	PEERLESS EAGLE COAL CO.	PO BOX 488 SUMMERSVILLE WV 26651	NICHOLAS	MINE NO. 15	11.00	20	
U-3012-89	PEERLESS EAGLE COAL COMPAN	P.O. BOX 488 SUMMERSVILLE WV 26651	NICHOLAS	ENOCH NO 16	16.00	20	
S-3017-87	PEERLESS FUELS INCORPORATE	P.O.DRAWER M SUMMERSVILLE WV 26651	NICHOLAS	NO 7 SURFACE MINE	133.20	10	
S-16-84	PEERLESS FUELS, INC.	DRAWER M, SUMMERSVILLE, WV	NICHOLAS	CALVIN JOB	33.00	10	46-07184
S-24-82	PEERLESS FUELS, INC.	DRAWER M, SUMMERSVILLE, WV	NICHOLAS		56.00	10	
S-3085-86	PEERLESS FUELS, INC.	DRAWER M, SUMMERSVILLE, WV	NICHOLAS	NO. 2 SURFACE MINE	129.00	10	
S-3037-88	PEERLESS FUELS, INC.	P.O. DRAWER M, SUMMERSVILLE, WV	NICHOLAS	NO. 4 SURFACE MINE	46.00	10	
S-3056-88	PEERLESS FUELS, INC.	P.O.DRAWER M, SUMMERSVILLE, WV	NICHOLAS	NO. 5 SURFACE MINE	66.00	10	
O-36-82	PERES PROCESSING, INC.	HC 81, BOX 207, MEADOR, WV 25682	MINGO	POND CREEK NO 1	5.00	20	46-06659
H-442	PERES PROCESSING, INC.	HC 81, BOX 207, MEADOR, WV 25682	MINGO		18.00	32	46-07079
U-62-85	PERES PROCESSING, INC.	HC 81, BOX 207, MEADOR, WV 25682	MINGO	NO. 2 MINE	10.00	20	
S-5012-86	PERES PROCESSING, INC.	HC 81, BOX 207, MEADOR, WV 25682	MINGO		130.81	10	46-07043
U-5074-86	PERES PROCESSING, INC.	HC 81, BOX 207, MEADOR, WV 25682	MINGO	ALMA NO. 3	10.00	20	
S-86-84	PERRY & HYLTON		BOONE	CRAZY	137.00	10	46-05220
H-224	PERRY & HYLTON	POBOX 986 BECKLEY WV 25801	BOONE		238.00	32	
S-12-84	PERRY & HYLTON		BOONE	CRAZY NO. 1	267.00	10	46-05220
S-7-81	PERRY & HYLTON	POBOX 986 BECKLEY WV 25801	BOONE	CRAZY NO. 1	915.00	10	46-05220
U-44-84	PERRY & HYLTON		BOONE		10.00	20	
54-77	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE	GANGO NO. 1	100.00	10	46-05874
83-80	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE	GANGO NO. 1	126.00	10	46-05874
S-21-83	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE	FRANCES NO. 1	162.00	10	46-06275
S-39-81	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE	INGRAM BRANCH	99.00	10	46-03179
S-4-82	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE		135.80	10	46-05953
S-41-82	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE		319.00	10	
S-44-82	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE		8.10	10	46-05874
S-70-83	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	FAYETTE	GANGO NO. 1	659.00	10	46-05674
I-603	PERRY & HYLTON	DRAWER AR BECKLEY WV 25801	RALEIGH	GARDEN GROUNDS	3.00	34	46-06107
S-87-84	PERRY & HYLTON		WYOMING		342.00	10	46-06236
80-79	PERRY & HYLTON	PO BOX AR, BECKLEY, WV	WYOMING	BUCK BRANCH	28.00	10	46-06536
I-669	PERRY & HYLTON	POBOX 986 BECKLEY WV 25801	WYOMING		1.00	36	
S-39-83	PERRY & HYLTON	POBOX 986 BECKLEY WV 25801	WYOMING	DEERFIELD NO. 2	1098.00	10	46-06670
S-99-82	PERRY & HYLTON		WYOMING		205.00	10	
S-45-85	PERRY & HYLTON		FAYETTE		121.00	10	
S-4025-86	PERRY & HYLTON, INC.		WYOMING		1085.00	10	46-06671
U-5070-86	PERRY AND HYLTON, INC.		BOONE	PERRY AND HYLTON MINE #7	10.00	20	
34-80	PETER WHITE COAL MINING		MINGO	TRUCK BARN STRIP	27.67	10	46-06174
D-54-81	PETER WHITE COAL MINING	PO DRAWER 960, PINEVILLE, WV	MINGO		3.53	20	
D-9-81	PETER WHITE COAL MINING	PO DARWER 960, PINEVILLE, WV	MINGO		9.21	20	
EM-34	PETER WHITE COAL MINING	PO DRAWER 960, PINEVILLE, WV	MINGO	WAR EAGLE NO 2 MINE	17.10	20	46-04338
EM-36	PETER WHITE COAL MINING	PO DRAWER 960, PINEVILLE, WV	MINGO		8.84	20	
H-148	PETER WHITE COAL MINING	PO DRWR 960 PINEVILLE WV 24874	MINGO		10.00	32	
H-313	PETER WHITE COAL MINING	PO DRWR 960 PINEVILLE WV 24874	MINGO		34.00	32	
O-128-83	PETER WHITE COAL MINING	PO BOX 960, PINEVILLE, WV	MINGO		42.00	38	
P-558	PETER WHITE COAL MINING	PO DRWR 960 PINEVILLE WV 24874	MINGO		25.44	31	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
R-630	PETER WHITE COAL MINING		MINGO	4 POLE REFUSE FACILITY	49.13	33	1211WV40
UO-398	PETER WHITE COAL MINING	PO BOX 960, PINEVILLE, WV	MINGO	MOHAWK NO. 1	8.50	20	46-06162
UO-558	PETER WHITE COAL MINING	PO BOX 960, PINEVILLE, WV	MINGO	MOHAWK NO. 3	6.50	20	
UO-567	PETER WHITE COAL MINING	PO BOX 960, PINEVILLE, WV	MINGO	MOHAWK MINE NO 2	15.30	20	
UO-660	PETER WHITE COAL MINING	PO DRAWER 960, PINEVILLE, WV	MINGO		8.87	20	
0-551	PETER WHITE COAL MINING	P.O. BOX 960, PINEVILLE, WV 24874	MINGO	POND CREEK NO. 1 MINE	32.51	10	
13-81	PETITTO BROTHERS		HARRISON	104B	15.00	10	46-02150
S-25-82	PETITTO BROTHERS	PO BOX 2270, CLARKSBURG, WV	HARRISON	104B	25.60	10	46-02150
S-5-83	PETITTO BROTHERS	PO BOX 2270, CLARKSBURG, WV	HARRISON		36.00	10	
78-76	PETITTO BROTHERS		LEWIS	RINEHART TRACT	27.00	10	46-02150
S-23-84	PETITTO BROTHERS	PO BOX 2270, CLARKSBURG, WV	UPSHUR	104B	167.00	10	46-02150
S-85-82	PETITTO BROTHERS	PO BOX 2270, CLARKSBURG, WV	UPSHUR	104B	36.50	10	46-02150
0-113-83	PHILIPPI MINING COMPANY	P.O. BOX 457, PHILIPPI, WV 26416	BARBOUR	DIAMOND #1	167.00	38	46-04168
U-15-83	PHILIPPI MINING COMPANY	P.O. BOX 457, PHILIPII, WV 26416	BARBOUR		94.86	20	
S-2025-87	PHILIPPI MINING COMPANY	BOX 457, PHILIPPI, WV 26416	BARBOUR	PHILIPPI MINE #1 STRIP	46.00	10	
UO-531	PHILLIPS COAL CO	BOX 777 OCEANA WV 24870	LOGAN	MINE NO. 2	1.90	20	46-06172
EM-47	PHILLIPS COAL CO.	BOX 777, OCEANA, WV 24870	LOGAN	MINE NO. 1	4.00	20	46-04783
I-701	PHILLIPS RUN COAL		NICHOLAS		0.30	38	
08169	PHILPOTT COAL		RALEIGH		0.00	33	
BR-47	PHILPOTT COAL		RALEIGH	#7 PLANT	0.00	33	
EM-16	PHOENIX RESOURCES	BOX 20, MONTERVILLE, WV	RANDOLPH		5.47	20	
H-502	PHOENIX RESOURCES	PO BOX 20, MONTERVILLE, WV	RANDOLPH		11.40	32	
S-419	PHOENIX RESOURCES	PO BOX 20, MONTERVILLE, WV	RANDOLPH		3.50	35	
S-462	PHOENIX RESOURCES	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	ELK RIVER TIPPLE	7.30	10	46-06235
S-2011-89	PHOENIX RESOURCES INC	PO BOX 20 MONTERYVILLE WV 26282	RANDOLPH	HICKORY LICK A	425.40	10	
107-79	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	GR NO. 7	161.00	10	46-02481
130-79	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	GR NO. 9	194.00	10	46-02481
136-80	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH		99.00	10	
55-78	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	GR NO. 5	164.00	10	46-02481
84-81	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	GR NO. 8	157.00	10	46-02481
D-112-82	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		6.10	20	
0-435	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH	STOCK PILE	17.50	20	
D-87-62	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		9.80	20	
H-237	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		12.00	32	46-04536
H-392	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		1.00	32	46-05658
I-334	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		17.00	34	
0-7-83	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH		61.10	33	
S-85-83	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH	AUGER	8.50	10	
U-195-83	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH		52.00	20	
U-6-83	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		5.30	20	
U-62-84	PHOENIX RESOURCES, INC.		RANDOLPH		13.43	20	46-07075
UO-299	PHOENIX RESOURCES, INC.		RANDOLPH		2.00	20	
UO-425	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		7.50	20	
UO-62	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		5.00	20	
UO 63	PHOENIX RESOURCES, INC.	POBOX 20 MONTERVILLE WV 26282	RANDOLPH		5.00	20	
UO-680	PHOENIX RESOURCES, INC.	PO BOX 20, MONTERVILLE, WV	RANDOLPH		4.50	20	
U-2002-86	PHOENIX RESOURCES, INC.		RANDOLPH	HICKORYLICK NO. 4C	17.80	20	
U-2014-86	PHOENIX RESOURCES, INC.		RANDOLPH	COALBANK FORK NO. 12	9.40	20	46-07062
UO-374	PIGEON BRANCH COAL CO.		MCDOWELL		9.52	20	
U-5067-87	PINE CREEK MINING II, INC.	BOX 100, BAISDEN, WV 25608	LOGAN	STONECOAL BR. DOROTHY	9.61	20	46-07456
U-51-84	PINE CREEK MINING, INC.	BOX 70, BAISDEN, WV	LOGAN		9.50	20	
U-159-83	PINE CREEK MINING, INC.	PO BOX 840, HOLDEN, WV	LOGAN		13.60	20	
U-5056-88	PINE CREEK MINING, INC.	BOX 76, BAISDEN, WV 25608	LOGAN	DEEP MINE NO. 3A	16.00	20	
S-55-83	PINEVIEW REALTY		MONONGALIA	AIRPORT NO. 1	27.99	10	
I-151	PINEY CREEK COAL		RALEIGH	MINE #2	1.00	38	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
H-720	PINEY CREEK COAL CO	PO DRWR G WELCH WV 24801	RALEIGH		34.87	32	
EM-121	PINEY CREEK COAL CO.	BOX 1671, BECKLEY, WV	RALEIGH	MINE NO. 2	7.21	20	46-0445
EM-106	PINEY CREEK COAL CO.	PO DRAWER G, WELCH, WV	RALEIGH		10.40	20	
O-13-85	PINEY CREEK COAL CO.	POORWR G WELCH WV 24801	RALEIGH		6.20	34	
U-162-83	PINEY FUELS,INC	41 EAGLES ROAD BECKLEY WV	RALEIGH		161.00	20	
69-81	PINNACLE CREEK MINING CORP	2773 USX TOWER, PITTSBURGH, PA	WYOMING		16.90	10	
R-721	PINNACLE CREEK MINING CORP	2773 USX TOWER, PITTSBURGH, PA	WYOMING		32.00	33	
S-62-85	PINNACLE MINING CO.		MONONGALIA		55.00	10	
S-1021-86	PINNACLE MINING CO. NW		MONONGALIA	HALL MINE #1	30.00	10	46-069
S-1020-86	PINNACLE MINING CO. OF NWV		MONONGALIA	JOHNSON TRACT MINE #1	120.00	10	46-0466
O-5035-86	PINNACLE ROCK COAL CORP.	PO BOX 652 DANVILLE WV 25053	BOONE	JACKS BR COAL HANDLING	11.00	34	46-0722
U-5016-86	PINNACLE ROCK COAL CORP.	PO BOX 652 DANVILLE WV 25053	BOONE	ATLANTA MINING MINE #4	37.00	20	
U-5011-86	PINNACLE ROCK COAL CORP.	PO BOX 652 DANVILLE WV 25053	BOONE	ATLANTA MINING NOS. 2&2A	10.00	10	46-0686
O-5010-86	PINNACLE ROCK COAL CORP.	PO BOX 652 DANVILLE WV 25053	BOONE	OVERLAND CONVEYOR	23.50	20	46-0675
O-5030-86	PINNACLE ROCK COAL CORP.	PO BOX 652 DANVILLE WV 25053	BOONE		4.00	38	
U-5001-87	PINNACLE ROCK COAL CORP.	PO BOX 652, DANVILLE, WV	BOONE	MINE NOS. 3 AND 4	57.00	20	
U-5064-87	PINNACLE ROCK COAL CORP.	PO BOX 652, DANVILLE, WV	BOONE	MINES 4A,5,6 & ADD OPENIN	65.00	20	
U-5014-88	PINNACLE ROCK COAL CORP.	P.O. BOX 652, DANVILLE, WV 25053	BOONE	MINE NO. 1A, NO. 7 & 7A	32.00	20	
S-3047-89	PINNACLE ROCK COAL CORP.	P.O. BOX 757 DANVILLE WV 25053	RALEIGH	PANTHER BRANCH NO 1 AND 2	27.00		
U-3048-89	PINNACLE ROCK COAL CORP.	P.O. BOX 757 DANVILLE WV 25053	RALEIGH		13.00		
U-27-85	PINNACLE ROCK COAL CORPORA	P.O. BOX 652, DANVILLE, WV 25053	BOONE		50.98	20	
U-71-84	PINNACLE ROCK COAL CORPORA	P.O. BOX 652, DANVILLE, WV 25053	BOONE		10.00	20	
S-1055-86	PINNANCLE MINING CO. OF NW		MONONGALIA		86.00	10	46-0692
O-20-82	PIONEER COAL SALES	PO BOX 3061, PRINCETON, NJ	PRESTON		5.00	35	
O-162-83	PIONEER FUEL CORP.		WYOMING		9.00	34	
H-518	PIONEER FUEL CORPORATION	SUITE A 107 GEORGE ST. BECKLEY WV	WYOMING		12.00	32	
UO 603	PIONEER FUEL CORPORATION	SUITE A, 107 GEORGE ST., BECKLEY WV	WYOMING		2.00	20	46-061
UO-604	PIONEER FUEL CORPORATION	SUITE A 107 GEORGE ST. BECKLEY WV	WYOMING	OCEANNA NO 1 MINE	5.00	20	46-015
UO-672	PIONEER FUEL CORPORATION	SUITE A 107 GEORGE ST. BECKLEY WV	WYOMING		2.00	20	
U-3002-88	PIONEER FUEL CORPORATION	107 GEORGE ST., BECKLEY, WV 25801	WYOMING	CHASE NO. 1	5.67	20	
U-3032-89	PIONEER FUEL CORPORATION	107 GEORGE ST SUITE A BECKLEY WV	WYOMING	ROADSIDE NO 1 MINE	3.11	10	
U-3031-89	PIONEER FUEL CORPORATION	107 GEORGE ST BECKLEY WV 25801	WYOMING	MOUNTAINTOP NO 1 MINE	6.92	20	
O-3050-89	PIONEER FUEL CORPORATION	107 GEORGE ST SUITE A,BECKLEY WV	WYOMING	REFUSE AREA NO 1	44.69		
64-80	PITCARIN PROPERTIES	POBOX 630 CLARKSBURG WV	MONONGALIA	LYNCH	18.00	10	46-06205
S-38-85	PLUS THREE INVESTMENTS		NICHOLAS		98.00	10	
S-3007-88	PLUS THREE INVESTMENTS INC	BOX 1145 BECKLEY WV 25801	NICHOLAS	SURFACE NO 3	70.00	10	
S-114-85	PLUS THREE INVESTMENTS,INC		NICHOLAS		97.00	10	46-07041
UO-23	POCA RIVER MINING		CLAY		3.00	20	46-05355
S-3045-88	POCAHONTAS COAL SALES, INR	RT. 9, BOX 8, BEAVER, WV 25813	WYOMING	BLACK EAGLE SURFACE #1	100.00	10	
UO-20	POCAHONTAS SUPREME COAL CO		MCDOWELL	NO. 2	2.00	20	46-0530
EM-12	POND CREEK MINING CO.	PO BOX 763, MATEWAN, WV	MINGO	MINE #1	5.50	20	46-02035
109-80	PONTORERO & SONS COAL	231 S WATER ST. MASONTOWN PA	PRESTON	BOLYARD/WOLFE	61.30	10	46-07685
U-4004-88	POWELL & HUNT COAL CO.,INC	P.O. BOX 1090, OCEANA, WV	WYOMING	MINE NO. 1	3.24	20	
179-78	PRATT MINING CO.	POBOX 175 HANSFORD WV 25103	FAYETTE	SURFACE NO. 1	60.00	10	46-03403
151-79	PRATT MINING CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	SURFACE NO. 7	62.00	10	46-03889
23-79	PRATT MINING CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	SURFACE NO. 7	76.00	10	46-03889
65-80	PRATT MINING CO.	PO BOX 175, HANSFORD, WV 25103	KANAWHA	SURFACE NO. 7	45.00	10	46-03889
92-74	PRATT MINING CO.	POBOX 175 HANSFORD WV 25103	KANAWHA	SURFACE NO. 7	45.00	10	46-03887
S-82-84	PRATT MINING CO.		KANAWHA	SHUNK LAND TRACT	50.00	10	46-06855
S-75-84	PRATT MINING CO.		KANAWHA	SURFACE NO. 7	53.00	10	46-03887
U-52-83	PRATT MINING CO.	PO BOX 175, HANSFORD, WV	KANAWHA		29.00	20	
74-80	PRATT MINING CO.	POBOX 175 HANSFORD WV 25103	RALEIGH	SURFACE NO. 8	83.00	10	46-03[illegible]3
S-25-85	PRESERVATI CONSTRUCTION		MCDOWELL		49.00	10	
S-42-81	PRESTON COUNTY COAL & COKE	P.O. BOX 176, MASTONWON, WV 26542	PRESTON	BULL RUN	55.00	10	46-04275
18-81	PRESTON COUNTY COAL & COKE	PO BOX 176, MASONTOWN, WV	MONONGALIA	GREER MANSION	100.00	10	46-06326

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
R-595	PRESTON COUNTY COAL & COKE		MONONGALIA		10.00	33	46-06326
0-132-83	PRESTON COUNTY COAL & COKE	PO BOX 176, MASONTOWN, WV	PRESTON		32.00	33	
R-7-83	PRESTON COUNTY COAL & COKE	PO BOX 176, MASONTOWN, WV	PRESTON		1.80	33	
S-1031-88	PRESTON COUNTY COAL & COKE	P.O. BOX 176, MASONTOWN, WV 26542	PRESTON	CASCADE TIPPLE STRIP NO. 3	10.00	10	
S-1040-88	PRESTON COUNTY COAL & COKE	P.O. BOX 176, MASONTOWN, WV 26542	PRESTON	CASCADE TIPPLE FACILITIES	41.84	10	
D-39-82	PRESTON ENERGY	202 E. HIGH ST., KINGWOOD, WV	PRESTON		7.50	20	
U-103-83	PRESTON ENERGY		PRESTON	BIG JOE MINE	10.75	20	
U-43-84	PRESTON ENERGY	202 E HIGH ST., KINGWOOD, WV	PRESTON		10.00	20	
UO-235	PRESTON ENERGY	202 E. HIGH ST., KINGWOOD, WV	PRESTON	SUNSHINE MINE	10.90	20	
UO-429	PRESTON ENERGY	202 E. HIGH ST.,KINGWOOD, WV	PRESTON		6.18	20	
S-28-81	PRESTON ENERGY, INC.	301 MAPLE LN KINGWOOD WV 26537	PRESTON	MYERS-BORGMAN	33.00	10	46-03726
0-86-82	PRESTON ENERGY, INC.	BOX 87, KINGWOOD, WV	PRESTON		18.00	31	
R-639	PRESTON ENERGY, INC.	BOX 87, KINGWOOD, WV	PRESTON		5.40	33	
0-43-85	PRESTON ENERGY, INC.		PRESTON		12.50	33	WV300219
0-1035-87	PRESTON ENERGY, INC.	202 EAST HIGH ST., KINGWOOD,WV	PRESTON		54.00	33	
UO-714	PRESTWOOD CO.	PO BOX 215, KINGWOOD, WV	RANDOLPH		25.80	20	
UO-251	PRIME COALS	PO BOX 1080, MORGANTOWN, WV	MONONGALIA		3.64	20	
7-81	PRIMROSE COAL	PO B 210 BRUCETON MILL WV 2652	PRESTON	LIVENGOOD, SPIKER	180.00	10	
S-6002-87	PRINCES SUSAN COAL CO.	405 CAPITOL ST., CHARLESTON,WV	KANAWHA	R. F. SAGER MINE NO. 2	167.00	10	
S-6035-86	PRINCESS BEVERLY COAL CO.	PO BOX 990, LEWISBURG, WV	KANAWHA	KAYFORD SURFACE MINE	299.30	10	
S-6005-88	PRINCESS BEVERLY COAL CO.	618 CHARLESTON NATL PLZA, CHARLSTN	KANAWHA	KAYFORD NO. 9 MINE	176.12	10	
S-11-85	PRINCESS POLLY ANNA COAL	DRAWER 650 RUPERT WV 25964	GREENBRIER		103.00	10	
0-60-82	PRINCESS POLLY ANNA COAL	BOX 990 LEWISBURG WV 24901	GREENBRIER		5.70	32	NONE
U-3030-86	PRINCESS POLLY ANNA COAL		GREENBRIER	CLEAR CREEK NO. 4	20.00	20	
U-3047-88	PRINCESS POLLY ANNA COAL	P.O. BOX 650, RUPERT, WV 25984	GREENBRIER	PRINCESS POLLY ANNA NO. 5	7.50	20	
60-80	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA	BOYD SCHOOL WILCHER	120.00	10	
1-481	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA		9.20	34	
S-25-84	PRINCESS SUSAN COAL CO.		KANAWHA	BLAKELEY SURFACE	311.00	10	46-02417
S-31-81	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA	CAMPBELLS CREEK SURFACE	269.00	10	46-05482
S-32-83	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA	CAMPBELLS CREEK SURFACE	358.00	10	46-05482
S-6-85	PRINCESS SUSAN COAL CO.		KANAWHA	FROZEN BRANCH SURFACE	216.00	10	46-06152
S-72-83	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA	CAMBELLS CREEK SURFACE	174.00	10	46-05482
S-76-82	PRINCESS SUSAN COAL CO.	405 CAPITOL ST RM 607 CHAS WV	KANAWHA		67.00	10	
S-6033-86	PRINCESS SUSAN COAL CO.	405 CAPITAL ST. SUITE 607 CHAR	KANAWHA	R.F. SAGER MINE NO. 1	200.00	10	46-02417
0-6015-87	PRINCESS SUSAN COAL CO.	405 CAPITOL ST., CHAS., WV	KANAWHA	BIG HOLLOW HAULROAD	29.70	32	
NONE	PRINCESS SUSAN COAL COMPAN		KANAWHA		216.00	10	
S-50-83	PROSPERITY ENERGY, INC.	BOX 66, LAYLAND, WV 25864	FAYETTE	SURFACE NO. 1	34.00	10	46-06441
U-2024-88	PROVEN COAL RESERVES, INC.	P.O. BOX 328, BUCKHANNON, WV 26201	LEWIS	VALLEY CHAPLE	9.90	20	
S-5053-86	PURE ENERGY FUELS, INC.	BOX 141, STAFFORDSVILLE, KY	BOONE	KITTANNING STRIP & AUGER	32.00	10	
S-3018-88	QUADLEE, INC.	BOX 357, BRADLEY, WV 25818	FAYETTE	BACKUS MT. SURFACE MINE	40.00	10	
S-14-85	R & N MINING		PRESTON		15.86	10	
U-3012-87	RAIDER RUN COAL CO.	PO DRAWER L, BIG STONE GAP, VA	FAYETTE		10.00	20	46-07287
S-3047-87	RAIDER RUN COAL CO.	PO DRAWER L, BIG STONE GAP, VA	FAYETTE	LANDISBURG AUGER JOB	33.60	10	
S-3013-87	RAIDER RUN COAL CO., INC.	P.O. DRAWER L, BIG STONE GAP, VA	FAYETTE		13.60	10	46-07287
S-3036-88	RAIDER RUN COAL COMPANY	P.O. DRAWER L, BIG STONE GAP, VA	FAYETTE	LANDISBURG AUGER II	32.00	10	
U-3090-87	RAIDER RUN COAL COMPANY	PO DRAWER L BIG STONE GAP VA 24226	FAYETTE	MINE NO 2	9.67	20	
D-10098	RALEIGH SIX COAL COMPANY		RALEIGH	RALEIGH SIX LOADOUT	6.00	34	46-05377
S-123-82	RAMADA MINING	BOX 86, POCAHONTAS, VA	MCDOWELL		132.80	10	
U-14-85	RAMADA MINING		MCDOWELL		15.60	20	
S-100-83	RAMADA MINING	BLUEFIELD, VA	MCDOWELL	BEELICK MINING	106.30	10	
U-2-84	RAMADA MINING	RT 2, BOX 1730, BLUEFIELD, VA	MCDOWELL		43.65	20	
U-4023-86	RAMADA MINING, INC.		MCDOWELL	MINE NO. 4	9.11	20	
0-6-82	RANGER FUEL		BOONE		4.00	34	
D-57-82	RANGER FUEL	PO BOX 966, BECKLEY, WV	RALEIGH		14.00	20	
EM-87	RANGER FUEL	PO BOX 966, BECKLEY, WV	RALEIGH		9.00	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
D-5-82	RANGER FUEL	POBOX 966 BECKLEY WV 25801	RALEIGH		13.90	33	
U-10-83	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	RALEIGH	LOWER EAGLE NO. 3	4.00	20	
UD-534	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	RALEIGH		22.00	20	
147-78	RANGER FUEL	PO BOX 966, BECKLEY, WV	WYOMING	GLEN ROGERS SIRIP	117.00	10	46-05418
D-130-82	RANGER FUEL	PO BOX 966, BECKLEY, WV	WYOMING	LOWER EAGLE NO. 4	12.00	20	
EM-105	RANGER FUEL	PO BOX 966, BECKLEY, WV	WYOMING	BECKLEY NO. 2	74.43	20	
EM-107	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	WYOMING		1.00	20	
EM-120	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	WYOMING		3.00	20	
EM-88	RANGER FUEL	PO BOX 966, BECKLEY, WV	WYOMING	BECKLEY NO 4	25.00	20	46-02166
H-244	RANGER FUEL	P O BOX 966 BECKLEY WV 25801	WYOMING		32.00	36	
H 637	RANGER FUEL	POBOX 966 BECKLEY WV 25801	WYOMING		14.00	32	
P-647	RANGER FUEL	POBOX 966 BECKLEY WV 25801	WYOMING		270.00	31	
P-726	RANGER FUEL	POBOX 966 BECKLEY WV 25801	WYOMING		219.90	31	
UO-633	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	WYOMING	SK-POP NO. 1 MINE	11.00	20	46-01962
S-107-85	RANGER FUEL	POBOX 966 BECKLEY WV 25802	RALEIGH		399.70	10	
I-46	RANGER FUEL		RALEIGH		3.00	38	
D-129-82	RANGER FUEL	PO BOX 966, BECKLEY, WV 25801	BOONE		20.00	20	
U-5042-89	RANGER FUEL COMPANY	PO BOX 966, BECKLEY, WV 25802	BOONE	CLINTON NO 5 MINE	11.66	20	
D-3007-86	RANGER FUEL CORP.	PO BOX 966 BECKLEY WV 25802	RALEIGH		24.00	30	
U-5001-86	RANGER FUEL CORP.		BOONE	CLINTON NO. 4	12.00	20	
D-3033-86	RANGER FUEL CORP.		RALEIGH	GLEN ROGERS HAULROAD	50.50	32	
U-3014-86	RANGER FUEL CORP.		RALEIGH	GILBERT NO. 2	10.20	20	
U-3013-86	RANGER FUEL CORP.		RALEIGH	GILBERT NO. 1	6.10	20	
O-5007-86	RANGER FUEL CORP.		BOONE	CLINTON REFUSE AREA	44.60	33	
U-3025-86	RANGER FUEL CORP.		RALEIGH	SKINNED POPLAR #2 MINE	10.00	20	
S-5040-86	RATON FUELS CORP.	DRAWER E, ELKHORN CITY, KY	MINGO	RATON FUELS SRFC MINE WV1	106.90	10	46-07361
S-6004-66	RAVEN HAWKING		MASON	LOUDERMILK PIT	270.00	10	
S-17-85	RAVEN HOCKING COAL		MASON		66.00	10	46-06104
80-81	RAVEN HOCKING COAL		MASON	MONTAGUE	530.00	10	46-06104
S-6019-86	RAVEN HOCKING COAL CORP.		MASON	BURRIS PIT	45.00	10	
D-6003-87	RAVEN HOCKING COAL CORP.	PO BOX 108, MASON, WV 25260	MASON		21.40	32	
U-6034 86	RAVEN HOCKING COAL CORP.	PO BOX 108, MASON, WV	MASON	NO. 1 MINE	9.20	20	
EM-18	RAWL SALES & PROC. CO.	PO BOX 503, MATEWAN, WV	MINGO		19.80	20	
U-30-83	RAWL SALES & PROCESS. CO.	P.O. BOX 722, MATEWAN, WV 25678	MINGO		65.00	20	
D-39-81	RAWL SALES & PROCESS. CO.	P.O. BOX 722, MATEWAN, WV 25678	MINGO		3.75	20	
76-80	RAYLE COAL CO.	67705 FRNDS CH R ST CLAIRSV OH	BROOKE	BROOKE COUNTY STRIP	141.80	10	46-06106
S-124-82	RAYLE COAL CO.	67705 FRNDS CH R ST CLAIRS OH	BROOKE	TURK LOBIE	170.00	10	46-06106
S-18-82	RAYLE COAL CO.	67705 FRNDS CH R ST CLAIRSV OH	BROOKE	RABB PIT	45.30	10	46-06106
S-50-84	RAYLE COAL CO.		BROOKE		83.10	10	46-06106
S-99-84	RAYLE COAL CO.		OHIO		277.80	10	
S-1031-87	RAYLE COAL CO.	67705 FRNDS CH RD, ST.CLAIR,OH	OHIO	BAKER	201.00	10	
S-1019-88	RAYLE COAL COMPANY	FRNDS CHRC RD., ST. CLAIRSVILLE, OH	OHIO	WHITEMAN	49.50	10	
S-1025-87	REBEKAH COAL CO., INC.	PO BOX 111, INDEPENDENCE, WV	PRESTON	REBEKAH COAL CO., INC.	26.00	10	
123-78	REBEL COAL COMPANY		LOGAN	REBEL NO. 2	451.97	10	46-04465
136-79	REBEL COAL COMPANY	302 SEARS BLDG., LOGAN, WV 25601	LOGAN		390.53	10	
126-78	RECKART MINING CO.	RT.3,BX 99, BRUCETON MILLS,WV	PRESTON	RECKART	58.00	10	46-04192
S-30-83	RECKART MINING CO.	RT 3, BOX 99, BRUCETON MILL,WV	PRESTON	SURFACE	60.00	10	46-04192
P-687	RED ASH SALES CO.	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL	PREPARATION FACILITY	37.24	31	46-05872
R-643	RED ASH SALES CO.	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL		103.66	33	
S-30-81	RED ASH SALES CO.	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL	SURFACE NO. 1	31.90	10	46-06493
S-72-85	RED ASH SALES CO.		MCDOWELL		71.10	10	
S-74-83	RED RIVER VALLEY COAL CO	PO BOX 190, HANSFORD, WV 25103	KANAWHA	PRATT NO. 7	196.00	10	46-05947
S-74-85	RED RIVER VALLEY COAL CO	PO BOX 190, HANSFORD, WV 25103	KANAWHA		27.00	10	46-03869
U-6001-86	RED RIVER VALLEY COAL CO	PO BOX 190, HANSFORD, WV 25103	KANAWHA	PRATT NO. 3 DEEP MINE	5.00	20	
U-92-84	RED RIVER VALLEY COAL CO	BOX 190, HANSFORD, WV 25103	KANAWHA		30.00	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
S-116-82	RED ROCK COAL CO.	POBOX 630 CLARKSBURG WV 26301	MONONGALIA	GUTTA MINE NO. 2	33.40	10	46-06199
S-59-84	RED ROCK COAL CO.	PO BOX 630, CLARKSBURG, WV	MONONGALIA		29.00	10	46-06199
S-93-83	RED ROCK COAL CO.	PO BOX 630, CLARKSBURG, WV	UPSHUR	RED ROCK MINE NO. 2	22.00	10	46-99250
D-6009-86	RED WARRIOR COAL COMPANY	PO BOX 190, HANSFORD, WV 25103	KANAWHA		21.00	32	
S-6019-88	RED WARRIOR COAL COMPANY	P.O. BOX 175, HANSFORD, WV 25103	KANAWHA	FORD NO. 5 SURFACE MINE	101.00	10	46-07178
S-6012-87	RED WARRIOR COAL COMPANY	P.O. BOX 190, HANSFORD, WV 25103	KANAWHA	MOCCASSIN HOLLOW	201.00	10	46-07178
EM-117	REGENCY FIN SERV & ASSOC	PO BOX 9, CRUMPLER, WV 24825	MCDOWELL	6-A MINE	14.60	20	46-02383
P-670	REGENCY FIN SERV & ASSOC	POBOX 9 CRUMPLER WV 24825	MCDOWELL		33.60	31	
U-155-83	REGENCY FIN SERV & ASSOC	PO BOX 9, CRUMPLER, WV	MCDOWELL	NO. 19	7.30	20	46-04550
U-73-84	REGENCY FIN SERV & ASSOC	PO BOX 9, CRUMPLER, WV	WYOMING	WYOMING #1	4.50	20	46-06701
EM-115	REGENCY FINAN SERV & ASSOC	PO BOX 9, CRUMPLER, WV 24825	MCDOWELL		2.10	20	
EM-116	REGENCY FINAN SERV & ASSOC	PO BOX 9, CRUMPLER, WV 24825	MCDOWELL	NO. 14	13.40	20	46-01967
EM-3	REGENCY FINAN SERV & ASSOC	PO BOX 9, CRUMPLER, WV 24825	MCDOWELL		6.85	20	
H-290	REGENCY FINAN SERV & ASSOC	POBOX 9 CRUMPLER WV 24825	MCDOWELL		14.00	32	
D-46-83	REGENCY FINAN SERV & ASSOC	PO BOX 9, CRUMPLER, WV	MCDOWELL		4.00	38	46-01831
P-723	REGENCY FINAN SERV & ASSOC	POBOX 9 CRUMPLER WV 24825	MCDOWELL		104.70	31	
U-71-83	REGENCY FINAN SERV & ASSOC	PO BOX 9, CRUMPLER, WV 24825	WYOMING	NO. 10	12.90	20	
S-22-81	REHOBOTH COAL	BOX 1424 ELKINS WV 26241	RANDOLPH	BLACK RUN NO. 1	384.00	10	46-05378
D-16-81	REMINGTON FUELS, INC.	POBOX 1276 WELCH WV 24801	WYOMING		5.20	38	
U-5072-86	RENATA COAL CO.		MINGO	MINE # 1	10.00	20	
D-55-85	RENSFORD PROCESSING INC	PO BOX 190, HANSFORD, WV 25103	KANAWHA		13.00	33	
P-574	RENSFORD PROCESSING INC	PO BOX 190 HANSFORD WV 25103	KANAWHA		4.25	31	46-03887
D-3-84	RIDGE LAND CO.	RT 2, BOX 172-D, BLUEFIELD, VA	MCDOWELL		23.00	33	46-03259
D-127-82	RIDGE LAND CO.	PO BOX 86, POCAHONTAS, VA	MCDOWELL	#22 MINE DUMP	27.18	20	
UD-501	RIDGE LAND CO.	RT 2, BOX 173-D, BLUEFIELD, VA	MCDOWELL		7.44	20	
H-402	RIDGE LAND CO.	RT 2, BOX 173-D, BLUEFIELD, VA	WYOMING		8.66	32	
U-3037-89	RIDGEWAY DEVELOPMENT CORP	620 FLORENCE ST MULLENS WV 25882	RALEIGH	MINE NO 1	13.52	20	
UD-751	RINGOLD MINING, INC.	PO BOX 433 KINGWOOD, WV 26537	MONONGALIA		3.28	20	
S-4004-87	RITCHIE EQUIPMENT INC.	PO BOX 224, HORSEPEN, VA	MCDOWELL	ECKMAN/PAGE STRIP & AUGER	99.00	10	46-04259
D-4012-87	RITCHIE EQUIPMENT INC.	P.O. BOX 224, HORSEPEN, VA 24619	MERCER	WIDEMOUTH SIDING	3.53	38	
C-55-85	RITCHIE EQUIPMENT, INC.		MCDOWELL		2.80	38	
D-6027-87	RIVER POINT PROCESSING CO.	P.O. BOX 15276, MARMET, WV 25315	KANAWHA	NO. 1 LOADING DOCK	14.63	34	
D-5025-88	RIVER RIDGE COAL CO., INC.	HC 81, BOX 207, MEADOR, WV 25682	LOGAN	ROSSMORE LOADOUT	6.00	34	
S-5033-87	RIVER RIDGE COALS, INC.	BOX 207, MEADOR, WV 25682	MINGO	NO. 1 SURFACE MINE	233.10	10	
S-5089-87	RIVER RIDGE COALS, INC.	BOX 207, MEADOR, WV 25682	MINGO	SURFACE MINE NO. 2	342.89	10	
10964	RIVERSIDE INDUSTRIES, INC.		WYOMING		0.00	33	
S-42-84	ROBERT M. LEWIS	RT. 1, BOX 73A, LOST CREEK, WV	HARRISON		68.00	10	
S-4001-87	ROBERT TYSON REALTY, INC.	PO BOX 489, WELCH, WV 24801	MCDOWELL	MINE NO. 1	16.90	10	
S-1005-88	ROBINSON COAL CO., INC.	RT. 1, BOX 522, CLARKSBURG, WV	HARRISON	DAVIS MINE	90.00	10	
UD-659	ROBINSON PHILLIPS COAL CO	DRAWER G WELCH, WV 24801	WYOMING		22.80	20	
UD-69	ROBINSON PHILLIPS COAL CO	DRAWER G, WELCH, WV 24801	WYOMING		7.00	20	46-05977
UD-76	ROBINSON PHILLIPS COAL CO	DRAWER G, WELCH, WV 24801	WYOMING		4.00	20	
S-21-82	ROBINSON PHILLIPS COAL CO	BOX 550, PINEVILLE, WV 24874	MCDOWELL		164.30	10	
S-58-83	ROBINSON PHILLIPS COAL CO	DRAWER G, WELCH, WV 24801	MCDOWELL	DAVEY MOUNTAIN VI SURFACE	168.16	10	46-05817
D-104-82	ROBINSON PHILLIPS COAL CO	PO BOX 350, PINEVILLE, WV	WYOMING		3.70	20	
D-12-81	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING		15.00	20	
D-6-82	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING		24.00	20	
I-600	ROBINSON PHILLIPS COAL CO	POBOX 550 PINEVILLE WV 24874	WYOMING	DAVY MAN REPAIR SHOP	20.50	36	46-05187
D-47-82	ROBINSON PHILLIPS COAL CO	BOX 550 PINEVILLE WV 24874	WYOMING	TURKEY CREEK RDA 2	45.00	33	
D-6-84	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING		89.36	31	46-03933
U-157-82	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING		5.70	20	
U-58-83	ROBINSON PHILLIPS COAL CO	BOX550, PINEVILLE, WV	WYOMING		6.60	20	
UD-26	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING	ALPINE NO. 2	3.00	20	46-05370
UD-4	ROBINSON PHILLIPS COAL CO	PO BOX 550, PINEVILLE, WV	WYOMING	NO. 7	3.00	20	46-02824
D-1-84	ROBINSON PHILLIPS COAL CO.	PO BOX 550, PINEVILLE, WV	WYOMING	NO. 1 RDA	29.23	33	

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45-81	ROBINSON, JAMES EXC		HARRISON		10.00	10	
U-2005-86	ROBLEE COAL CO.		BARBOUR	37 B	22.10	20	46-0708
D-49-82	ROBLEE COAL CO.	PO BOX 2198, BUCKHANNON,WV	BARBOUR	(KING KNOB COAL CO.)	13.20	20	
U-1020-86	ROBLEE COAL CO.		HARRISON	JESSE'S RUN MINE #1	8.40	20	
U-2026-87	ROBLEE COAL CO.	PO BOX 2198, BUCKHANNON, WV	BARBOUR	TALLMANS RUN MINE NO. 1	19.40	20	
UO-408	ROCK BULL MINING	BOX Q, MASONTOWN, WV 26542	PRESTON		12.00	20	
U-61-85	ROCKRIDGE COAL		WYOMING	FRONTIER NO. 4	5.00	20	
U-23-85	ROCKRIDGE COAL CO		WYOMING		9.40	20	
U-34-85	ROCKRIDGE COAL CO		WYOMING	PIONEER NO. 1	14.40	20	46-0717
O-12-85	ROCKRIDGE COAL CO.		WYOMING		37.30	38	
U-13-85	ROCKRIDGE COAL CO.		WYOMING		7.70	20	
U-37-85	ROCKRIDGE COAL CO.		MCDOWELL	CAMELOT MINE	9.93	20	46-0544
U-60-85	ROCKRIDGE COAL CO.		WYOMING	NEW HORIZON	23.00	20	
U-4013-86	ROCKRIDGE COAL CO.		WYOMING	OUTPOST	9.80	20	
U-41-85	ROCKRIDGE COAL COMPANY		WYOMING	ORIFICE MINE NO. 1	18.96	20	46-0380
S-91-85	ROCKVILLE MINING		PRESTON		125.00	10	46-0255
237-76	ROCKVILLE MINING CO.	RT 1 BOX 135-A ALBRIGHT WV	PRESTON	JOB NO. 2	50.00	10	46-0255
S-105-82	ROCKVILLE MINING CO.	RT 2 BOX 87-X ALBRIGHT WV	PRESTON	JOB NO. 3	48.00	10	46-0255
S-65-82	ROCKVILLE MINING CO.	RT 2 BOX 87-X ALBRIGHT WV	PRESTON	JOB NO. 1	475.00	10	46-0256
S-1035-86	ROCKVILLE MINING CO.		PRESTON		120.00	10	46-0255
S-1053-86	ROCKVILLE MINING CO.		PRESTON		32.00	10	46-0255
65-78	ROCKVILLE MINING CO.	RT 1, BOX 135-A, ALBRIGHT, WV	PRESTON		158.00	10	46-0255
D-31-81	ROCKY HOLLOW COAL CO.	PO BOX 763, MATEWAN, WV	MINGO		13.00	20	
EM-28	ROCKY HOLLOW COAL CO.	POBOX 703 MATEWAN WV 25678	MINGO		3.75	20	
D-91-82	ROSE EAGLE COAL CORP.	P.O. BOX 95, TWILIGHT, WV 25204	BOONE		37.83	20	
O-166-83	ROSEDALE COAL CO.	PO BOX 676, MORGANTOWN, WV	MONONGALIA		3.86	34	
94-79	ROSTOSKY MINING	PO BOX 134, MT. LAKE PK, MD	MINERAL	CARL M. BURGESS	28.00	10	46 0308
S-8-83	ROSTOSKY MINING	POBOX 134 MT LAKE PARK, MD	MINERAL	D & L	21.00	10	46-0308
S-2057-86	ROSTOSKY MINING CO.	PO BOX 232, MT. STORM, WV	GRANT		121.30	10	
P-688	ROYAL COAL CO.	BOX 948 BECKLEY WV 25801	FAYETTE	CLAREMONT PREP PLANT	57.14	31	46-0329
S-74-82	ROYAL COAL CO.	PO BOX 948, BECKLEY, WV 25801	FAYETTE		74.00	10	46-0644
O-8-84	ROYALTY SMOKELESS COAL CO.	BOX 1027, WELCH, WV 24844	MCDOWELL		147.41	31	
S-4013-87	ROYALTY SMOKELESS COAL CO.	DRWR G, WELCH, WV	MCDOWELL	ROCK NARROWS STRIP MINE	226.50	10	
U-4005-88	ROYALTY SMOKELESS COAL CO.	DRAWER G, WELCH, WV 24801	MCDOWELL	PEG	2.16	20	
U-60-84	RUM CREEK COAL SALES, INC.	P.O. BOX 447, STOLLINGS, WV 25646	LOGAN		56.95	20	
S-2010-88	RUPERT FEED AND SUPPLY	P.O. BOX 130, RUPERT, WV 25984	WEBSTER	COWEN STRIP #1	22.00	10	
S-3023-86	RUPERT FEED AND SUPPLY CO.		GREEN/SUMM	#2 STRIP	124.20	10	46-0680
U-4022-86	RUSTCORP. CO.	RT.2, BOX 172-D, BLUEFIELD, VA	MCDOWELL	NO. 1	10.00	20	
19-81	S & K CORPORATION		CLAY	E.L. OSBORN, HEUS	70.00	10	
81-80	S & K CORPORATION		CLAY	E.L. OSBORN, HEUS	70.00	10	46-0569
S-19-82	S & K CORPORATION		CLAY		50.00	10	
U-153-83	S & M COAL CO.	BOX 840 HOLDEN WV 25625	WYOMING	NO. 6	8.06	20	46-0679
U-5061-86	S & M COAL CO.		LOGAN	D-23 MINE	10.00	20	
D-15-82	S & M COAL CO.	BOX 27, IAEGER, WV 24844	WYOMING	NO. 5	9.90	20	46-06510
UO-202	S & M COAL CO.	BOX 27 IAEGER WV 24844	WYOMING	NO. 4	3.00	20	46-0579
O-12-81	SAARCAR COAL, INC.	P O BOX 6100 HUNTINGTON WV	WAYNE		9.10	34	
S-75-84	SALERNO		HARRISON		53.00	10	46-0609
S-83-84	SALERNO		HARRISON		13.20	10	
D-56-81	SAMARA COAL		MINGO		4.00	20	
UO-499	SAMARA COAL		MINGO	MINE NO 1	9.00	20	46-05475
S-1084-86	SANDRIDGE COAL CO., INC.	PO BOX 235, MAIDSVILLE, WV	MONONGALIA	SANDRIDGE COAL CO.-MINE#1	31.20	10	
U-5085 86	SATURN COAL CO., INC.	BOX 217 MAIN ST. OAK HILL, WV	BOONE	MINE #1	10.00	20	
U-3043-88	SATURN COAL COMPANY INC.	PO BOX 1664 OAK HILL WV 25901	NICHOLAS	DAVIS RIDGE #1	34.00	20	
S-15-85	SAYCO DEVELOPMENT CO.		BROOKE		77.00	10	46-06847
U-6040-88	SCHOLL AND WILCHER	1033 QUARRIER ST., CHARLESTON, WV	KANAWHA	RUSH CREEK DEEP MINE NO. 1	8.76	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
S-42-85	SCJL CO-LEASING		MONONGALIA		10.00	10	
0-82-82	SECOND STERLING CORP.	GEN DEL KEYSTONE WV	MCDOWELL	NO. 1 PREP PLANT	26.08	31	46-03444
0-83-82	SECOND STERLING CORP.	PO DRAWER AB, KEYSTONE, WV	MCDOWELL	CLARKS BRANCH REFUSE	170.00	33	45-0036
U-52-84	SECOND STERLING CORP.		MCDOWELL		78.20	20	
S-1032-89	SENNETT TRIPLETT COAL INC	RT 1 BOX 19A MORGANTOWN WV 26505	MONONGALIA	ARNETTSVILLE SITE	59.36	10	
S-64-85	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA		19.00	10	
S-1004-86	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA		47.12	10	46-06930
S-1008-87	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA	SITE C	13.40	10	
S-1007-87	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA	SHAFER STRIP	8.02	10	
S-1035-88	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA	SELL SITE	10.00	10	
S-1043-87	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19, MORGANTOWN, WV 26505	MONONGALIA	GODZAK STRIP	23.00	10	
S-1014-87	SENNETT TRIPLETT COAL, INC	RT. 1, BOX 19A, MORGANTOWN, WV	MONONGALIA	HENRY SITE	6.83	10	
R-690	SEWELL COAL CO	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS		74.90	33	
R-707	SEWELL COAL CO	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS	NO. 1 REFUSE AREA	95.50	33	
R-715	SEWELL COAL CO	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS	HOLCOMB REFUSE AREA	8.80	33	46-40224
119-80	SEWELL COAL CO.	RT 2 BOX 165 NETTIE WV 26681	FAYETTE	WINONA CONTOUR STRIP	92.30	10	46-06442
EM-102	SEWELL COAL CO.	RT 2, BOX 165, NETTIE, WV	NICHOLAS		4.80	20	
EM-109	SEWELL COAL CO.	RT 2, BOX 165, NETTIE, WV	NICHOLAS		13.47	20	
EM-111	SEWELL COAL CO.	RT 2, BOX 165, NETTIE, WV	NICHOLAS		30.91	20	
EM-112	SEWELL COAL CO.	RT 2, BOX 165, NETTIE, WV	NICHOLAS		14.16	20	
EM-95	SEWELL COAL CO.	RT 2, BOX 165, NETTIE, WV	NICHOLAS		27.37	20	
M-652	SEWELL COAL CO.	RT. 2 BOX 165 NETTIE WV 26681	NICHOLAS		6.50	32	
P-642	SEWELL COAL CO.	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS	NO 4 PLANT	14.20	31	46-03251
P-653	SEWELL COAL CO.	RT. 2 BOX 165	NICHOLAS		8.00	31	
P-677	SEWELL COAL CO.	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS		40.00	31	
R-644	SEWELL COAL CO.	RT 2 BOX 165 NETTIE WV 26881	NICHOLAS	REFUSE SITE NO. 1-B	86.80	33	46-40073
R-671	SEWELL COAL CO.	RT 2 BOX 165 NETTIE WV 26681	NICHOLAS	REFUSE AREA NO. 4	27.90	33	46-40047
U-9-84	SEWELL COAL CO.	RT 3, BOX 125, NETTIE, WV	NICHOLAS		6.00	20	
U-3066-86	SEWELL COAL CO.		NICHOLAS	SEWELL NO. 3 MINE	20.70	20	
O-2019-86	SGP PROCESSING, INC.	PO BOX 208 WEBSTER SPRINGS WV	WEBSTER	COOL SPRING KNOB PREP	3.70	31	
S-1022-87	SHAFER BROTHERS CONSTR.	RT 2, BOX 303, MORGANTOWN, WV	MONONGALIA	SITE 1	10.00	10	
S-1021-89	SHAFER BROTHERS CONSTRUCTI	RT 2 BOX 303 MORGANTOWN, WV 26505	MONONGALIA	SITE 2	12.00		
O-15-84	SHANA COALS, INC.	PO BOX 724, CLARKSBURG, WV	TAYLOR		3.90	34	
O-7-84	SHANNON POCAHONTAS MINING	DRAWER J, WELCH, WV 24801	MCDOWELL		108.78	31	
UO-614	SHANNON POCAHONTAS MINING	DRAWER 6, WELCH, WV 24801	MCDOWELL		61.00	20	
R-4-83	SHANNON-POCAHONTAS MINING	DRAWER 6, WELCH, WV	MCDOWELL	TWO BRANCH	60.00	33	
O-52-85	SHARON COAL		PRESTON		1.40	34	46-02319
S-33-85	SHARON COAL CO	BOX 94, REEDSVILLE, WV 26547	PRESTON		12.00	10	46-02319
S-52-84	SHARON COAL CO.		MONONGALIA		74.60	10	46-02319
O-55-82	SHARON COAL CO.	PO BOX 294, REEDSVILLE, WV	PRESTON		8.10	34	
S-11-84	SHARON COAL CO.	BOX 94, REEDSVILLE, WV	PRESTON	SC MINE NO. 3	55.00	10	
S-12-85	SHARON COAL CO.		PRESTON		33.00	10	
S-84-82	SHARON COAL CO.	PO BOX 294, REEDSVILLE, WV	PRESTON	SC MINE NO. 1	34.20	10	46-02319
S-1036-87	SHARON COAL CO., INC.	BOX 294, REEDSVILLE, WV	PRESTON	NO. 7	16.30	10	
O-145-83	SHARON COAL COMPANY	P.O. BOX 294, REEDSVILLE, WV 26547	PRESTON		11.00	31	
S-1028-87	SHARON COAL COMPANY	P.O. BOX 217 REEDSVILLE, WV 26547	PRESTON	MT. ZION STRIP	160.00	10	
S-1014-88	SHARON COAL COMPANY	P.O. BOX 294, REEDSVILLE, WV 26547	MONONGALIA	SHARON COAL 87	118.00	10	
UO-585	SHARPLES ASSOCIATES COAL		BOONE		4.80	20	
U-49-85	SHAYBETH MINING		WYOMING	MINE NO. 3	7.20	20	46-04728
EM-56	SHAYBETH MINING, INC.	DRAWER K, GILBERT, WV	WYOMING		3.60	20	
UO-329	SHELL RAY MINING, INC.	BOX 426, IAEGER, WV 24844	WYOMING		4.00	20	
S-1004-87	SIDELAND COAL CORP.	RT 5, BOX 96, MORGANTOWN, WV	PRESTON	GOLDSTROM STRIP	10.50	10	
U-6020-88	SIMMONS CREEK COAL CO. INC	1117 VIRGINIA ST., E., CHARLESTON	KANAWHA	SIMCO 81	10.00	20	
O-19-82	SIMRON FUEL CO.	BOX 550 PINEVILLE WV 24874	MCDOWELL		10.00	33	
UO-462	SIMRON FUEL CO.	POBOX 550 PINEVILLE WV 24874	WYOMING		20.00	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
D-9-82	SLAB FORK COAL CO.		RALEIGH		4.80	20	
S-3-82	SLAB FORK COAL CO.		RALEIGH		58.70	10	
U-5026 86	SLICK ROCK COAL CO.		LOGAN	SUGARTREE BRANCH DEEP MIN	4.00	20	
EM-7	SOUTHEAST LEASING INC	BOX 370 STANAFORD WV 25927	FAYETTE		5.15	20	
I-448	SOUTHEAST LEASING INC	P.O. BOX 370 STANAFORD WV 25927 0	FAYETTE		0.76	34	
183-72	SOUTHERN APPALACHIAN COAL		BOONE	BULL CREEK	100.00	10	
EM-59	SOUTHERN APPALACHIAN COAL	217 94TH, MARMET, WV	BOONE		8.00	20	
D-40-83	SOUTHERN APPALACHIAN COAL	217 94TH ST MARMET WV 25315	BOONE	POND NO. 6 AND HAULROAD	12.00	32	46-03774
R-743	SOUTHERN APPALACHIAN COAL	217 94TH ST MARMET WV 25315	BOONE		75.00	33	
UO-420	SOUTHERN APPALACHIAN COAL	217 94TH ST., MARMET, WV	BOONE	MINE NO. 3	2.80	20	46-03441
UO-465	SOUTHERN APPALACHIAN COAL	217 94TH ST., MARMET, WV	BOONE		4.00	20	
H-428	SOUTHERN APPALACHIAN COAL	217 94TH ST. MARMET WV 25315	KANAWHA		14.00	32	
U-3-85	SOUTHERN MINERALS, INC.	GEN. DEL., PRINCETON, WV	MCDOWELL	MINE NO. 1	16.79	20	46-05421
U-4034-88	SOUTHERN MINERALS, INC.	P.O. BOX 5066, PRINCETON, WV 24740	MCDOWELL		4.20	20	
UO-650	SOUTHERN MINGO COAL CO.	PO BOX 119, NAUGATUCK, WV	MINGO		46.00	20	
EM-125	SOUTHERN OHIO COAL CO.	PO BOX 552, FAIRMONT, WV	MARION	MARTINKA #1 MINE	48.30	20	
R-746	SOUTHERN OHIO COAL CO.	PO BOX 552, FAIRMONT, WV 26554	MARION		96.40	33	
R-747	SOUTHERN OHIO COAL CO.	PO BOX 552, FAIRMONT, WV 26554	MARION		36.60	33	
D-1001-87	SOUTHERN OHIO COAL COMPANY	P.O. BOX 552, FAIRMONT, WV 26554	MARION	MARTINKA COMBINED REFUSE	222.00	33	
U-6017-87	SPARKY MINING CO.	PO BOX 3026, CHARLESTON, WV	KANAWHA	SPARKY MINING CO. MINE #1	9.60	20	
U-6022-87	SPARKY MINING COMPANY	P.O. BOX 3026, CHARLESTON, WV	KANAWHA	MINE NUMBER 2 AND 3	7.70	20	46-05131
U-6023 87	SPARKY MINING COMPANY	P.O. BOX 3026, CHARLESTON, WV	KANAWHA	DEEP MINE NO. 3	4.90	20	
R-3-83	SPENCER RESOURCES, INC.	PO BOX 295, MARION, IL 62959	RALEIGH		56.61	33	46-06629
R-2-84	SPENCER RESOURCES, INC.	PO BOX 295, MARION, IL 62959	WYOMING		20.00	33	
UO 575	SPRING RIDGE COAL CO.	RT 3, BOX 87A, WEBSTER SPRS,WV	WEBSTER		11.00	20	
O-37-83	SPRING RIDGE COAL CO.	BOX A, BOLAIR, WV 26288	WEBSTER		2.80	35	
O-68-82	SPRING RIDGE COAL CO.	BOX A, BOLAIR, WV 26288	WEBSTER		17.00	34	46-03429
R-722	SPRING RIDGE COAL CO.	BOX A, BOLAIR, WV	WEBSTER		17.60	33	
U-136-83	SPRING RIDGE COAL CO.	RT 3, BOX 87A, WEBSTER SPRS,WV	WEBSTER	(MCCALL FUELS)	63.72	20	
UO-677	SPRING RIDGE COAL CO.	BOX A, BOLAIR, WV 26288	WEBSTER		14.00	20	
R-2031 87	SPRING RIDGE COAL CO.	PO BOX 1400, WEBSTER SPR, WV	WEBSTER	BERGOO #2 608 PILE-REPROC	47.00	33	
72-81	SPRING RIDGE COAL CO. INC	P.O. BOX 1400, WEBSTER SPRINGS, WV	WEBSTER	PARCOAL NO. 2	15.00	10	46-06352
U 2004 88	SPRING RIDGE COAL COMPANY	P.O. BOX 1400, WEBSTER SPRINGS, WV	WEBSTER	LAUREL CREEK DEEP MINE #1	10.00	20	
U-2016-88	SPRING RIDGE COAL COMPANY	P.O. BOX 1400, WEBSTER SPRINGS, WV	WEBSTER	BAUGHMAN RUN DEEP MINE #1	15.28	20	
S-2036-88	SPRING RIDGE COAL COMPANY	P.O. BOX 1400, WEBSTER SPRINGS, WV	WEBSTER	DEEP RUN AUGER NO. 1	20.00	10	
S-2034-88	SPRING RIDGE COAL COMPANY	P.O. BOX 1400, WEBSTER SPRINGS, WV	WEBSTER		74.34	10	
P-572	SPROUSE CREEK PROC.	POBOX 712 MATEWAN WV 25678	MINGO	SPROUSE CREEK PREP PLANT	295.62	31	46-05368
O-41-84	SPROUSE CREEK PROCESSING	PO BOX 712, MATEWANT, WV	MINGO		209.00	33	
24-79	STANLEY INDUSTRIES	RT 3 BOX 40 BRIDGEPORT WV	BARBOUR	NO. 2	75.00	10	46-04308
S-69-84	STANLEY INDUSTRIES	RT 3 BOX 40 BRIDGEPORT WV	BARBOUR		60.00	10	46-04308
U-19-85	STANLEY INDUSTRIES	RT 3, BOX 40, BRIDGEPORT, WV	BARBOUR		6.70	20	
S-10-84	STANLEY INDUSTRIES, INC.	RT. 3, BOX 40, BRIDGEPORT, WV 26330	BARBOUR	COVE DISTRICT NO. 1	49.00	10	
S-2002-87	STANLEY INDUSTRIES, INC.	RT 3, BOX 40, BRIDGEPORT, WV	BARBOUR	COVE RUN NO. 1 SURFACE MI	191.58	10	
S-2002-89	STANLEY INDUSTRIES, INC.	RT. 3, BOX 40, BRIDGEPORT, WV 26330	BARBOUR	FROST RUN NO. 1	48.00	10	
U-2006-88	STANLEY YOCKYM	P.O. BOX 2542, CLARKSBURG, WV 26302	LEWIS	WASHBURN NO. 1	9.25	20	
S-1035-89	STANYA COAL COMPANY	PO BOX 1258 FAIRMONT WV 26554	MARION	PRECIOUS PATTY #1	80.00	10	
S-3-83	STANYA SALES CO.	P.O.BOX 247, WESTON, WV 26452	MARION		13.00	10	
H-735	STARVAGGI INDUSTRIES	401 PENN. AVE WEIRTON WV 26062	BROOKE		2.00	32	
D-49-82	STARVAGGI INDUSTRIES	401 PENN. AVE WEIRTON WV	BROOKE		6.50	35	
S-113-82	STARVAGGI INDUSTRIES	401 PENN. AVE WEIRTON WV 26062	BROOKE	NO. 1051	173.10	10	46-02767
D-55-81	STATUE MINING CO., INC.	RT 4, BOX 66, KINGWOOD, WV	PRESTON		8.00	20	
D-490	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBG PA 15219	RALEIGH		13.00	20	
EM-114	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTS., PA	RALEIGH		20.00	20	
H-306	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBG PA 15219	RALEIGH	HAULROAD	20.00	32	
H-372	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBGH PA 15219	RALEIGH		25.00	32	

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N-337	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBG PA 15219	RALEIGH		35.00	32	46-01510
O-64-83	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBG PA 15219	RALEIGH		10.00	30	
O-94-83	STERLING SMOKELESS COAL	KOPPERS BLDG, PITTSBURGH, PA	RALEIGH	WHITBY TIPPLE REFUSE	36.00	31	46-03253
U-122-83	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTSBURGH, PA	RALEIGH	MINE NO. 4	12.00	20	46-01508
U-149-83	STERLING SMOKELESS COAL	KOPPERS BLDG PITTSBURGH PA	RALEIGH	#23 MINE	6.00	20	46-01506
U-26-83	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTS., PA	RALEIGH		16.00	20	
UO-395	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTSBURGH, PA	RALEIGH		5.00	20	46-05506
UO-52	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTS., PA	RALEIGH		1.00	20	46-05566
UO-572	STERLING SMOKELESS COAL	KOPPERS BLDG., PITTS., PA	RALEIGH		9.00	20	
U-5037-87	STOLLINGS MINING CO., INC.	25 DOG FORK RD, CHAPMANVILL,WV	BOONE	STOLLINGS MINING CO. #1	8.60	20	
U-1050-86	STONE KING COAL CO.		MONONGALIA	STONE KING NO. 2	11.20	20	
S-1079-86	STONE KING COAL CO., INC.	PO BOX 1080 MORGANTOWN, WV	MONONGALIA	CRAFTS RUN SURFACE MINE	17.00	10	
S-1016-87	STONE KING COAL CO., INC.	PO BOX 1080, MORGANTOWN, WV	MONONGALIA	POND	10.00	10	
U-3028-86	STONEY COAL CO.		RALEIGH	HENDRICK NO. 2	35.00	20	
D-109-82	STONEY COAL CO.	41 EAGLES RD, BECKLEY, WV	RALEIGH		16.70	20	
UO-252	STONEY COAL CO.	41 EAGLES RD, BECKLEY WV	WYOMING		8.00	20	
U-3067-86	STONEY COAL CO.		RALEIGH	MINE NO. 1	10.00	20	
U-3045-86	STONEY COAL CO.		RALEIGH		60.00	20	46-06722
O-3027-86	STONEY COAL CO.	41 EAGLES RD BECKLEY WV 25801	RALEIGH	HAULROAD	3.50	32	
U-42-85	STONEY COAL COMPANY		RALEIGH	FARLEY BRANCH NO. 1	10.00	20	
R 3025 87	STONEY COAL COMPANY	41 EAGLES RD, BECKLEY, WV	RALEIGH	STONEY NO. 3 REFUSE FAC.	13.00	33	
U-3024-88	STONEY COAL COMPANY	41 EAGLES ROAD, BECKLEY, WV 25801	WYOMING	NO. 8 MINE	10.00	20	
132-76	STUTLER, RICHARD A.	PO BOX 2523, CLARKSBURG, WV	HARRISON	MCCROY TRACT	15.00	10	46-02642
S-3051-88	SUMMERSVILLE 5 BLOCK COAL	P.O. BOX 1529, PIKEVILLE, KY 41501	NICHOLAS	SFB #108	650.00	10	
O-100-83	SUMMERSVILLE FIVE BLOCK	BOX 927, SUMMERSVILLE WV 26651	CLAY		18.71	31	
O-66-82	SUMMERSVILLE FIVE BLOCK	BOX 927, SUMMERSVILLE, WV 26651	CLAY		14.47	33	
S-6010-89	SUMMERSVILLE FIVE BLOCK CO	PO BOX 1529 PIKEVILLE KY 41501	NICHOLAS	RAMP RUN SURFACE MINE	392.00	10	
EM-27	SUNBEAM ENERGY CORP.	BOX 667, PECKS MILL, WV	LOGAN		3.71	20	46-04444
S-2030-88	SUPERIOR MINING COMPANY	P.O. BOX 630, WESTON, WV 26452	LEWIS	SASSAFRAS NO. 1	296.00	10	
D-13-81	SUPEROR POCAHONTAS COAL CO	P.O. BOX 504, OMAR, WV 25638	MINGO	D-3	4.15	20	46-04728
S-59-85	SYCAMORE COAL CO.		MASON		23.00	10	
S-24-84	SYCAMORE COAL COMPANY	PO BOX 301, MASON, WV 25260	MASON	PARSON'S PIT	34.00	10	46-06775
S-303-85	T & L AUGERING CORP.		FAYETTE		16.00	10	
S-3047-86	T & L AUGERING CORP.		FAYETTE	MEDO #1 STRIP	29.10	10	46-07026
U-3015-87	T & L AUGERING CORP.	PO BOX 967, SHADY SPRINGS, WV	FAYETTE	MEDO DEEP MINE	5.40	20	
O-3018-87	T & L AUGERING CORPORATION	P.O. BOX 967, SHADY SPRINGS,WV	FAYETTE	CLIFFTOP PREP PLANT	25.00	31	
UO-512	T & R COAL CO.	BOX 303, BIRCH RIVER, WV 26610	BRAXTON	3A MINE	12.10	20	46-06114
EM-41	T & T ENERGY	PO BOX 206, BRUCETON MILLS, WV	PRESTON		33.10	20	
EM-113	T & T FUELS, INC.	PO BOX 206, BRUCETON MILLS, WV	PRESTON		2.28	20	
U-125-83	T & T FUELS, INC.	PO BOX 206, BRUCETON MILLS, WV	PRESTON	MINE #3	14.00	20	46-03149
S-1070-86	T B CONSULTANTS, INC.	215 MILL ST., FAIRMONT, WV 26554	MONONGALIA		49.00	10	46-03236
H-696	TAMROY MINING		FAYETTE		4.00	32	
S-3-84	TAMROY MINING	PO BOX 359, FAYETTEVILLE, WV	RALEIGH	TAMROY SURFACE	160.00	10	46-06877
S-1-81	TAMROY MINING INC	PO BOX 359, FAYETTEVILLE, WV	FAYETTE	TAMROY SURFACE	59.00	10	46-04946
S-13-82	TAMROY MINING INC	PO BOX 359, FAYETTEVILLE, WV	FAYETTE		95.00	10	46-06877
S-2-81	TAMROY MINING INC	PO BOX 359, FAYETTEVILLE, WV	FAYETTE	TAMROY SURFACE	117.00	10	46-04946
S-95-82	TAMROY MINING INC	PO BOX 359, FAYETTEVILLE, WV	RALEIGH		86.00	10	46-06877
UO-131	TANER COAL CO.	PO BOX 143, CRAIGSVILLE, WV	NICHOLAS		9.00	20	
U-50-85	TANER COAL CO.		NICHOLAS	TANER MIN NO. 2	12.70	20	
S-40-82	TEN A COAL CO.	PO DRAWER B, WILSONBURG, WV	HARRISON		33.00	10	46-02737
S-2012-87	TEN-A COAL COMPANY	RT 4, BOX 253, CLARKSBURG, WV	BARBOUR	WARD SURFACE MINE	64.70	10	
S-1025-88	TEN-A COAL COMPANY	RT. 4, BOX 253, CLARKSBURG, WV	HARRISON		10.00	10	
S-1032-87	TEN-A COAL COMPANY, INC.	RT. 4, BOX 253, CLARKSBURG, WV	MARION	KOON SURFACE MINE	27.50	10	
S-49-82	TEN-A-COAL CO.		BARBOUR		7.00	10	46-02737
S-70-82	TEN-A-COAL CO.	RT 4 BOX 253 CLARKSBURG WV	BARBOUR	EDGE	7.00	10	46-05682

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
123-79	TEN-A-COAL CO.	RT 4, BOX 253, CLARKSBURG, WV	HARRISON	NANCY	36.00	10	46-0273
242-7	TEN-A-COAL CO.		HARRISON		23.70	10	
32-79	TEN-A-COAL CO.	RT 4, BOX 253, CLARKSBURG, WV	HARRISON	NANCY	15.00	10	46-0607
66-81	TEN-A-COAL CO.	RT 4, BOX 253, CLARKSBURG, WV	HARRISON	NANCY	21.00	10	46-0273
NONE	TEN-A-COAL CO.		HARRISON		3.00	34	46-0597
S-15-83	TEN-A-COAL CO.	RT 4, BOX 253, CLARKSBURG, WV	HARRISON	NANCY	13.00	10	46-0273
S-7-83	TEN-A-COAL CO.	RT 4, BOX 253, CLARKSBURG, WV	HARRISON	NANCY	74.90	10	46-0273
45-75	TEN-A-COAL CO.		UPSHUR	LAROSA	38.00	10	46-0650
S-1019-89	TERRA CONTRACTORS INC	1743 FAIRMONT AVE FAIRMONT WV 26554	MARION	CHIPPS SURFACE MING	9.80	10	
D-106-82	TERRY EAGLE COAL CO.	BOX 487, SUMMERSVILLE, WV	NICHOLAS		22.00	20	
D-41-81	TERRY EAGLE COAL CO.		NICHOLAS		7.90	20	
D-42-81	TERRY EAGLE COAL CO.		NICHOLAS	WARREN EAGLE NO. 2	9.00	20	46-0475
H-561	TERRY EAGLE COAL CO.	RT 7, BOX 900, SUMMERSVILLE,WV	NICHOLAS		10.00	36	
D-4-82	TERRY EAGLE COAL CO.	BOX 487, SUMMERSVILLE, WV	NICHOLAS		4.80	34	
P-569	TERRY EAGLE COAL CO.		NICHOLAS		83.00	31	46-4014
U-118-83	TERRY EAGLE COAL CO.		NICHOLAS	CROSS LANES EAGLE MINE #1	10.00	20	46-0669
U-160-83	TERRY EAGLE COAL CO.		NICHOLAS		16.00	20	
U-3-84	TERRY EAGLE COAL CO.		NICHOLAS	NO. 3	13.00	20	46-0742
UO-652	TERRY EAGLE COAL CO.	BOX 487, SUMMERSVILLE, WV	NICHOLAS	ROBERT EAGLE NO. 2	13.00	20	46-0350
UO-653	TERRY EAGLE COAL CO.	BOX 487, SUMMERSVILLE, WV	NICHOLAS		9.00	20	
UO-654	TERRY EAGLE COAL CO.	BOX 187, SUMMERSVILLE, WV	NICHOLAS		7.00	20	
UO-655	TERRY EAGLE COAL CO.	BOX 487, SUMMERSVILLE, WV	NICHOLAS		13.00	20	
UO-742	TERRY EAGLE COAL CO.		NICHOLAS	ROBERT EAGLE MINE NO. 3	9.00	20	46-020
O-3037-86	TERRY EAGLE COAL CO.	ONE PGP PLACE PITTSBURGH PA	NICHOLAS		79.00	32	1211WV-
S-3029-87	TERRY EAGLE COAL CO.	RT 2, BOX 900, SUMMERSVILLE,WV	NICHOLAS	MEADOW CK SURFACE #1	177.00	10	
S-3069-87	TERRY EAGLE COAL COMPANY	RT.2, BX 900, SUMMERSVILLE, WV	NICHOLAS	MEADOW CREEK SURFACE #2	284.00	10	
U-6016-88	TERRY EAGLE COAL COMPANY	ROUTE 2, BOX 900, SUMMERSVILLE, WV	NICHOLAS	BELLS CREEK MINE NO. 1	12.50	20	
S-3034-88	TERRY EAGLE COAL COMPANY	RT.2, BOX 900, SUMMERSVILLE, WV	NICHOLAS	LITTLE ELK MINE #1	252.00	10	
S-3022-88	TERRY EAGLE COAL COMPANY	RT. 2, BOX 900, SUMMERSVILLE, WV	NICHOLAS	MEADOW CREEK SURFACE NO. 3	397.00	10	
U-6001-90	TERRY EAGLE COAL COMPANY	RT 2 BOX 900, SUMMERSVILLE WV 26651	NICHOLAS	HARRISON MINE NO 1	6.11	20	
U-79-84	TESTA COAL COMPANY	P.O. BOX 39035, CLEVELAND, OH 44139	CLAY		11.76	20	
S-3075-87	THE LADY H COAL CO., INC.	PO BOX 150, LEIVASY, WV	NICHOLAS	BRUSHY MEADOW CK SURFACE	73.60	10	
U-3076-87	THE LADY H COAL CO., INC.	PO BOX 150, LEIVASY, WV	NICHOLAS	BRUSHY MEADOW CK DEEP	6.90	20	
U-3001-88	THE LADY H COAL CO., INC.	P.O. BOX 150, LEVIASY, WV	NICHOLAS	LIME LAUREL CRK DP MN #1	5.60	20	
S-3023-88	THE LADY H COAL CO., INC.	P.O. BOX 150, LEIVASY, WV 26676	NICHOLAS	SURFACE MINE NO. 5	43.21	10	
S-3068-88	THE LADY H COAL CO., INC.	BOX 150, LEVIASY, WV 26676	NICHOLAS	NO 10 SURFACE MINE	133.00	10	
S-3069-88	THE LADY H COAL CO., INC.	BOX 150, LEVIASY, WV 26676	NICHOLAS	NO. 9 SURFACE MINE	65.00	10	
U-3062-88	THE LADY H COAL CO., INC.	P.O. BOX 150, LEVIASY, WV 26676	GREENBRIER	RADER RUN MINE NO. 1	11.26	20	
U-3063-88	THE LADY H COAL CO., INC.	P.O. BOX 150K, LEVIASY, WV 26676	GREENBRIER	STONY RUN MINE NO. 1	13.43	20	
S-5006-88	THE POWELLTON COMPANY	P.O. BOX 8, MALLORY, WV 25634	LOGAN	AUGER II & AUGER III MINES	13.52	10	
D-28-65	THE VALLEY CAMP COAL		KANAWHA		43.00	38	
R-3-85	THISTLE COAL CO.		RALEIGH		40.00	33	
R-3010-88	THISTLE COAL COMPANY	200 9 PRKWY CTR PITTSBURGH,PA	RALEIGH		10.00	10	
U-2015-88	THOMAS MOUNTAIN, INC.	P.O. BOX 1052, CRAIGSVILLE, WV	WEBSTER	SINK NO. 1	3.50	20	
D-38-83	THOMPSON COAL & CONST.	BOX 228 CLARKSBURG WV 26301	HARRISON	TIPPLE	1.00	34	
S-32-82	THOMPSON COAL & CONST.	BOX 228, CLARKSBURG, WV 26301	MARION	RIVER	45.10	10	46-02557
103-78	THOMPSON COAL & CONST.	BOX 228 CLARKSBURG WV 26301	TAYLOR	SKYVIEW	78.26	10	46-06646
219-76	THOMPSON COAL & CONST.	BOX 228 CLARKSBURG, WV 26301	TAYLOR	SKYVIEW	60.00	10	46-02557
S-77-85	THOMPSON COAL & CONSTR.		MARION		115.40	10	
245-68	THOMPSON COAL COMPANY	13 HILLCREST DR PRINCETON WV	MERCER	THOMPSON LEASEHOLD	28.00	10	46-07896
U-133-83	THUNDER MOUNTAIN ENERGY	BOX 840, HOLDEN, WV 25625	LOGAN		7.03	20	
UG-526	THUNDER MOUNTAIN ENERGY	PO BOX 840, HOLDEN, WV	LOGAN	NO 1	5.00	20	46-01502
U 5050-87	THUNDER MOUNTAIN ENERGY	PO BOX 474, GILBERT, WV	LOGAN	MINES 4/5	6.00	20	
U-5051-87	THUNDER MOUNTAIN ENERGY	PO BOX 474 GILBERT,WV 25621	LOGAN	MINES 4/5	5.06	20	
U-4013-88	TIFFANY MINING, INC.	P.O. BOX 426, IAEGER, WV 24844	MCDOWELL	NO. 1 MINE	2.55	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
U-4018-86	TIMCO ENERGY, INC.		MCDOWELL	TURKEY BRANCH NO. 1 & 2	15.00	20	
S-1033-87	TOM PATTERSON COAL CO.	RD #2, BOX 355-B, SMITHFIEL,PA	TAYLOR	CARR SURFACE MINE	28.80	10	
U-3040-87	TOMMY CREEK COAL CO.	PO BOX 1401, BECKLEY, WV	RALEIGH	TOMMY CREEK NO. 1 MINE	16.73	20	
UO-535	TOMLYS BRANCH COAL COMPANY	BOX 865 BECKLEY WV 25801	BOONE		4.58	20	
U-5076-87	TOP KAT MINING INC	BOX 52, PEACH CREEK, WV 25639	LOGAN	MOORE FORK #2	13.00	20	
U-2035-88	TOT COAL COMPANY	P.O. BOX 2, MONTERVILLE, WV 26282	RANDOLPH	HEWETT FORK NO. 1	10.00	20	
UO-361	TRACE BRANCH ASSOCIATES		MCDOWELL		6.00	20	
U-150-83	TRACE FORK COAL COMPANY	BOX 1027 WELCH WV 24801	MCDOWELL	NO. 27	5.99	20	46-0527
U-156-83	TRACE FORK COAL COMPANY	BOX 1027, WELCH, WV 24801	MCDOWELL	MISSY MINE	4.53	20	46-0530
U-183-83	TRACE FORK COAL COMPANY	BOX 1027 WELCH WV 24801	MCDOWELL		14.74	20	
U-184-83	TRACE FORK COAL COMPANY	BOX 1027 WELCH WV 24801	MCDOWELL	NO. 12 MINE	15.75	20	46-0513
U-27-83	TRACE FORK COAL COMPANY	BOX 1027, WELCH, WV	MCDOWELL		5.70	20	
U-36-83	TRACE FORK COAL COMPANY	PO BOX 1027, WELCH, WV	MCDOWELL	NO. 8	9.71	20	46-0347
U-37-83	TRACE FORK COAL COMPANY	BOX 1027, WELCH, WV	MCDOWELL		25.50	20	
S-5040-87	TRIAD MINING COMPANY	P.O. BOX 119, NAUGATUCK, WV 25685	MINGO	TOM'S BRANCH MINE	297.00	10	
O-5031-88	TRIAD MINING COMPANY	P.O. BOX 119, NAUGATUCK, WV 25685	MINGO		63.50	32	
O-1009-87	TRIDELL REALTY CO.	67705 FRNDS CH RD,ST CLAIRS,OH	OHIO	TRIDELL #1, PREP. PLANT	42.70	31	
O-1066-86	TRIDELL REALTY CO.	67705 FRNDS CH RD,ST CLAIRS,OH	OHIO	TRIDELL #1	76.80	31	
U-175-83	TRIDELL REALTY COMPANY	67705 FRDS CH RD ST CLAIRS. OH	OHIO	#1 MINE	23.00	20	
U-181-83	TRIDELL REALTY COMPANY	67705 FRDS CH RD ST CLAIRS, OH	OHIO	#1 MINE RIVER LOADING	10.00	34	
U-22-85	TRIPLE 'A' COALS		NICHOLAS	GLADE CREEK	10.00	20	46-0568
U-3006-87	TRIPLE 'A' COALS, INC.	300 LOCUST DR., SUMMERSVILL,WV	NICHOLAS	DEEP MINE NO. 2	2.30	20	
O-3037-87	TRIPLE 'A' COALS, INC.	300 LOCUST DRIVE, SUMMERSVILLE, WV	NICHOLAS	REFUSE DISPOSAL AREA	10.00	33	
S-3061-88	TRIPLE 'A' COALS, INC.	300 LOCUST DR., SUMMERSVILLE, WV	NICHOLAS	STILLHOUSE BRANCH STRIP	208.00	10	46-073
132-80	TRIPLE A COAL		NICHOLAS	SURFACE NO. 1	40.00	10	46-0568
S 96 85	TRIPLE A COALS		NICHOLAS		262.00	10	
S-3052-88	TRIPLE A COALS INC	300 LOCUST DR SUMMERSVILLE WV 26651	NICHOLAS	SURFACE MINE NO 5	108.00	10	
S-3028-87	TRIPLE A COALS, INC.	300 LOCUST DR, SUMMERSVILLE,WV	NICHOLAS	SURFACE MINE NO. 4	121.00	10	
O-3077-87	TRIPLE A COALS, INC.	300 LOCUST DR, SUMMERSVILLE,WV	NICHOLAS	UNITED EAGLE NO. 2 TIPPLE	2.70	34	
U-3045-87	TRIPLE A COALS, INC.	300 LOCUST DR., SUMMERSVILLE, WV	NICHOLAS	MULLENS MINE #1	25.00	20	
UO-50	TUG RIVER COAL CO.	BOX 1027, WELCH, WV	MCDOWELL		3.00	20	
R-438	TUG VALLEY COAL PROCESSING		MINGO		203.80	33	
S-17-83	TWIN ACTION MINING	POBOX 12463 ROANOKE VA 24025	LOGAN		145.00	10	
O-54-82	TWIN BRANCH COAL		MINGO		25.00	31	
O-31-82	TWIN BRANCH COAL CO.	POBOX 12190 LEXINGTON KY 40581	MINGO		19.90	34	
U-173-83	TWIN BRANCH COAL CO.	2355 HARRODSBURG RD, LEXING,KY	MINGO		9.45	20	
124-78	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN		224.00	10	
S-5084-86	TWIN BRANCH COAL COMPANY	P. O. BOX 840, HOLDEN, WV 25625	LOGAN		427.00	10	
U-5022-86	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN	MINE NO. D-19	23.66	20	
2-77	TWIN BRANCH COAL COMPANY	BOX 840, HOLDEN, WV 25625	LOGAN		530.00	10	46-05793
5-80	TWIN BRANCH COAL COMPANY	BOX 840 HOLDEN WV 25625	LOGAN		148.00	10	
6-80	TWIN BRANCH COAL COMPANY	BOX 840 HOLDEN WV 25625	LOGAN		129.00	10	
O-27-82	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN		1.35	34	
O-53-82	TWIN BRANCH COAL COMPANY	P.O. BOX 840 HOLDEN WV 25625	LOGAN	NO. 27 HAULROAD	27.25	32	46-07165
P-581	TWIN BRANCH COAL COMPANY	BOX 840 HOLDEN WV 25625	LOGAN		13.00	31	
S-9-85	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN		186.91	10	
S 496	TWIN BRANCH COAL COMPANY	BOX 840 HOLDEN WV 25625	LOGAN	STOCKPILE	1.50	35	46-01384
O-37-85	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN		53.40	33	WV40534-
U-5021-86	TWIN BRANCH COAL COMPANY	P O BOX 840 HOLDEN WV 25625	LOGAN	MINE NO. 20-D	16.47	20	46 07068
U-5059-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	DEEP MINE NO. 1	13.00	20	
U-5060-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	DEEP MINE NO. 2	15.00	20	
U-5061-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	DEEP MINE NO. 3	14.00	20	
U-5043-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	DEEP MINE NO. 23	7.50	20	
O-5044-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	HAULROAD	10.00	32	
U-5008-89	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	MINGO	TWIN BRANCH DEEP MINE	12.00	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA
U-5063-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	#27 SOUTH III	13.00	20	
U-5021-89	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN	WHITMAN #1 DEEP	12.00	20	
S-5062-88	TWIN BRANCH COAL COMPANY	P.O. BOX 840, HOLDEN, WV 25625	LOGAN		422.00	10	
R-625	TYGART COAL CO.	PO BOX 670, WESTON, WV 26452	LEWIS		29.00	33	46-0607
UO-730	TYGART COAL CO.	PO BOX 670, WESTON, WV 26452	LEWIS		12.70	20	
0-5-85	TYGART COAL CO.	PO BOX 2150, CLARKSBURG, WV	LEWIS		24.00	33	
R-546	TYGART COAL COMPANY	PO BOX 670, WESTON, WV 26452	LEWIS		10.00	33	
U-3057-87	TYGART COAL COMPANY	P.O. BOX 2150, CLARKSBURG, WV 26301	NICHOLAS	FREEPORT MINE #S 1-A, 1-B	11.00	20	46-0749
U-3058-87	TYGART COAL COMPANY	P.O. BOX 2150, CLARKSBURG, WV 26301	NICHOLAS		20.00	20	
U-220-83	U.S. STEEL MINING	PO BOX 430 GARY, WV 24836	MCDOWELL		20.27	20	
UO-541	U.S. STEEL MINING	PO BOX 430 GARY, WV 24836	MCDOWELL	MAITLAND SHAFT	4.62	20	46-0140
44-77	U.S. STEEL MINING		KANAWHA	NO. 27	97.00	10	46-0132
UO-670	U.S. STEEL MINING		KANAWHA	MINE NO. 72	7.10	20	
U-75-84	U.S. STEEL MINING		MCDOWELL	NO. 9	180.00	20	46-0141
U 88-84	U.S. STEEL MINING	GEN. DEL., GARY, WV	MCDOWELL	NO. 14-4	73.00	20	
0-130-83	U.S. STEEL MINING	P O BOX 430 GARY WV 24836	WYOMING		231.58	31	
U-204-83	U.S. STEEL MINING	PO BOX 430, GARY, WV 24836	WYOMING		114.76	20	
UO-707	U.S. STEEL MINING CO	PO BOX 430, GARY, WV 24836	WYOMING	SHAWNEE MINE	14.00	20	46-0590
EM-25	U.S. STEEL MINING CO., INC	PO BOX 430, GARY, WV 24836	WYOMING		82.82	20	
0-4017-86	U.S. STEEL MINING CO., INC		MCDOWELL	#6 TEMP. STORAGE AREA	7.20	38	46-0142
0-116-83	OFFINGTON DOCK		MONONGALIA		3.50	34	
124-80	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA	CAMPBELL'S CREEK	110.00	10	46-0319
D-119-82	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN,WV	KANAWHA		6.00	20	
D-120-82	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN,WV	KANAWHA		6.00	20	
D-121-82	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN, WV	KANAWHA		21.90	20	
D-122-82	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN,WV	KANAWHA		10.50	20	
0-40-83	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIK, WV	KANAWHA		15.00	38	
0-58-82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDEKIN WV	KANAWHA		41.80	31	46-0322
0-59-82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA		95.00	32	
0-60-82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA		60.70	33	
S-100 82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA	ROCKER HOLLOW STRIP	175.00	10	
S-101-82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA		204.00	10	
S-9-82	UNION CARBIDE CORP.	32 SANDERSON RD CLENDENIN WV	KANAWHA	ROCKER HOLLOW STRIP	64.00	10	46-0651
U-110-83	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN, WV	KANAWHA	JOES HOLLOW	9.00	20	46-01345
U-07-83	UNION CARBIDE CORP.		KANAWHA		84.00	20	
UO-111	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN, WV	KANAWHA		5.00	20	
UO-304	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN, WV	KANAWHA		0.22	20	
UO-530	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN,WV	KANAWHA		2.50	20	
UO-545	UNION CARBIDE CORP.	32 SANDERSON RD, CLENDENIN, WV	KANAWHA		14.00	20	
UO 557	UNION CARBIDE CORP.	32 SANDERSOK RD, CLENDENIN, WV	KANAWHA		17.50	20	
S-6-82	UNION GRANT COAL CO.	RT 1 BOX 238 LOST CREEK WV 263	HARRISON	NO. 1	66.00	10	46-06377
144-75	UNITED COALS	DRAWER J JANE LEW WV 26378	HARRISON	MCWHORTER NO. 1	81.00	10	46-05970
175-70	UNITED COALS		HARRISON	MCWHORTER NO. 1	80.00	10	46-05970
0-24-84	UNITED COALS	DRAWER J, JANE LEW, WV	HARRISON		14.00	34	46-05970
S-07 82	UNITED COALS	DRAWER J JANE LEW WV 26378	HARRISON		115.00	10	46-05970
S-34-85	UNITED COALS	DRAWER J JANE LEW WV 26378	HARRISON		40.00	10	
S-1033-86	UNITED COALS, INC		HARR/UPSH	JESSE'S RUN SURFACE MINE	63.40	10	
0-1025-86	UNITED COALS, INC.		HARRISON		0.80	30	
S-1074-86	UNITED COALS, INC.	PO DRAWER J JANE LER, WV 26378	LEWIS	JESSES RUN MINE #2	182.70	10	46-07085
S-1002-87	UNITED COALS, INC.	PO DRAWER J, JANE LEW, WV	HARRISON	PEEL TREE #1	81.00	10	
D-7059	UNITED POCAHONTAS COAL CO		MCDOWELL		0.00	20	46-01832
46-01414	UNITED STATES STEEL CORP.		MCDOWELL	#15 REPAIR SHOP (INC)	0.00	36	46-01414
46-01421	UNITED STATES STEEL CORP.		MCDOWELL	GARY REPAIR SHOP (INC)	0.00	38	
I-740	UPCO COAL INC	409 1ST AVENUE NUTTER FORT WV 26301	HARRISON		0.35	34	
S-2009-89	UPCO COAL INC.	408 FIRST AVE NUTTER FORT WV 26301	UPSHUR	CLEAVENGER SURFACE MINE	101.80	10	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
S-2010-87	UPCO COAL, INC.	142 W. MAIN ST., BRIDGEPORT,WV	UPSHUR	LOCKWOOD (UPCO NO. 2)	21.60	10	—
197-75	UPCO COAL, INC.	408 2ST AVE., NUTTER FORT, WV 26301	UPSHUR	GALLOWAY	45.00	10	46-04351
S-102-82	UPHOLD TRUCKING	RT 12 BOX 10A MORGANTOWN WV	PRESTON	NO. 1	10.00	10	46-06632
S-49-84	UPHOLD TRUCKING	RT 8, BOX 10-A, MORGANTOWN, WV	PRESTON		7.00	10	46-06332
S-1019-87	UPHOLD TRUCKING	RT 12, BOX 10-A, MORGANTOWN,WV	PRESTON	NO. 2	48.00	10	46-06632
S-1004-88	UPHOLD TRUCKING	ROUTE 12, BOX 10-A, MORGANTOWN, WV	PRESTON	UPHOLD TRUCKING NO. 3	45.00	10	
INC-7-81	USE COAL CO.		MARION		5.00	10	
S-77-83	USE COAL CO.		MARION	BAHL-USE NO. 2	75.80	10	
S-2016-86	USE COAL, INC.		LEWIS		252.00	10	46-04481
R-4010-89	V & C, INC.	P.O. BOX 264, MT. HOPE, WV 25880	MCDOWELL	HEMPHILL REPROCESSING	48.00	38	
S-4019-87	VACO ENTERPRISES, INC	PO BOX 307 AVONDALE WV 24811	MCDOWELL	CRANE CREEK NO 2	194.11	10	
D-22-81	VALLEY CAMP COAL CO.	2971 E DUPONT AV,SHREWSBURY,WV	KANAWHA		9.39	20	
H-318	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		14.00	32	
R-507	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		4.00	33	
143-77	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA	VC NO. 46	130.20	10	46-04206
154-77	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA	VC NO. 17	281.00	10	46-05551
18-80	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA	VC NO. 45	150.00	10	46-06103
47-79	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA	BUFFLICK STRIP	170.00	10	46-01351
D-118-82	VALLEY CAMP COAL CO.	2971 E DUPONT A, SHREWSBURY,WV	KANAWHA	NO. 47	7.11	20	46-06559
EM 21	VALLEY CAMP COAL CO.	2971 E DUPONT AVE,SHREWSBUR,WV	KANAWHA		12.35	20	
EM-22	VALLEY CAMP COAL CO.	2971 E DUPONT A, SHREWSBURY,WV	KANAWHA		7.00	20	
EM 23	VALLEY CAMP COAL CO.	2971 E DUPONT AVE, SHREWSBU,WV	KANAWHA		22.26	20	
EM-24	VALLEY CAMP COAL CO.	2971 E DUPONT AVE, SHREWSBU,WV	KANAWHA		7.00	20	
H-348	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		12.00	32	46-05551
H-473	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		2.00	32	
H-476	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		30.00	32	
H-541	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		19.00	32	
H-57	VALLEY CAMP COAL CO.		KANAWHA		30.00	32	46-05551
I-508	VALLEY CAMP COAL CO.		KANAWHA		4.30	34	
I-540	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		10.00	36	
D-27 83	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA		47.00	38	
P-553	VALLEY CAMP COAL CO.	2971 E DUPONT AVE SHREWS WV	KANAWHA	NO. 8 CLEANING PLANT	18.00	31	46-03203
S-87-83	VALLEY CAMP COAL CO.		KANAWHA	SURFACE MINE NO. 6	283.00	10	46-01351
U-29-83	VALLEY CAMP COAL CO.	2971 E DUPONT A, SHREWSBURY,WV	KANAWHA	VC NO. 41	32.00	20	46-04135
UO-634	VALLEY CAMP COAL CO.	2971 E DUPONT A, SHREWSBURY,WV	KANAWHA	NO. 43	5.20	20	46-05906
R-56	VALLEY CAMP COAL CO.		KANAWHA	HICKS HOLLOW	9.00	33	46-03203
S-5783-C	VALLEY CAMP COAL CO.		KANAWHA		7.00	10	46-03300
S-65-84	VALLEY CAMP COAL CO.		KANAWHA		105.00	10	
U-56-85	VALLEY CAMP COAL CO.		KANAWHA	41-A	7.90	20	
S-6017-86	VALLEY CAMP COAL CO.		KANAWHA	AREA 6 MINE	300.00	10	
S-17-82	VALLEY MINING CO.	VISTA DEL RIO BLDG. MGTN WV	MONONGALIA	MASHUDA NO. 29	62.00	10	46-06210
S-64-83	VALLEY MINING CO.		MONONGALIA	MASHUDA NO. 30	160.00	10	46-05601
O-84-82	VANCE COAL CO.	POBOX 663 MORGANTOWN WV 26505	MONONGALIA		5.00	34	
EM-75	VANTAGE MINING COMPANY	DRAWER 1560, RICHLANDS, VA 24641	WAYNE		3.40	20	
P-727	VANTAGE MINING COMPANY	DRAWER 1560, RICHLANDS, VA 24641	WAYNE		54.50	31	
S-4007-89	VARIABLE DEVELOPMENT INC	PO BOX 263 PINEVILLE WV 24874	BRAXTON	VARIABLE SURFACE MINE 1	8.00	10	
U-11-83	VEN BLACK COAL	BOX 43, TAMS, WV 25933	RALEIGH		14.20	20	
U-53-85	VICKIE ENERGY, INC.		GREENBRIER		26.80	20	
S-3038-86	VICKIE ENERGY, INC.		NICHOLAS	SURFACE #1	35.00	10	
S-30-85	VICTORY MINING CORP.		MCDOWELL		219.80	10	
U-62-85	VIKING COAL		PRESTON	KAMBRIC NO. 2	8.80	20	
U-145-82	VIKING COAL CO.	BOX 87, KINGWOOD, WV	PRESTON		6.90	20	
U-5-85	VIKING COAL CO.		PRESTON		11.93	20	
UO-517	VIKING COAL CO.	PO BOX 87, KINGWOOD, WV	PRESTON		9.42	20	
H-164	VIKING POCAHONTAS	PO BOX 685, RAINELLE, WV	GREENBRIER		35.00	36	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
65-76	VIKING POCAHONTAS	PO BOX 685, RAINELLE, WV	GREENBRIER		160.00	10	46-0476
N-58	VIKING POCAHONTAS	PO BOX 685, RAINELLE, WV	NICHOLAS		13.45	36	
176-75	VIKING POCAHONTAS	PO BOX 685, RAINELLE,WV 25967	NICHOLAS	LITTLE CLEAR CREEK	87.00	10	46-0476
H-207	VIKING POCAHONTAS	PO BOX 685, RAINELLE, WV	GREENBRIER		6.88	32	
O-24-85	VIRGINIA CREWS COAL CO		MCDOWELL		14.95	32	
ER-1	VIRGINIA CREWS COAL CO.	RT HCR 60 BOX 12, IAEGER, WV	WYOMING	DELWARE NO. 1 MINE	2.00	20	46-0473
D-47-82	VIRGINIA CREWS COAL CO.	RT HCR 60, BOX 12, IAEGER, WV	MCDOWELL	NO. 8	3.45	20	
U-158-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL	NO. 4	37.45	20	46-00781
D-15-81	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV	MCDOWELL	NO. 1	3.90	20	46-0639
D-52-82	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL		14.85	20	
D-8-82	VIRGINIA CREWS COAL CO.		MCDOWELL		9.70	20	
O-117-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL		93.47	33	46-01975
O-56-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV	MCDOWELL		15.90	38	46-0220
O-75-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL	RED ASH TIPPLE	9.50	34	46-0220
S-30-84	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL	AUGER A-2	17.20	10	
S-62-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL	AUGER A-1	5.40	10	
U-42-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV	MCDOWELL	MINE NO. 15	2.40	20	46-0425
U-76-84	VIRGINIA CREWS COAL CO.		MCDOWELL		12.41	20	
U-9-85	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL		13.73	20	
U-97-83	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV	MCDOWELL	NO. 2	6.10	20	46-00717
S-92-82	VIRGINIA CREWS COAL CO.	BOX 727 IAEGER WV 24844	WYOMING		76.30	10	
U-77-84	VIRGINIA CREWS COAL CO.		WYOMING		20.39	20	
S-4020-86	VIRGINIA CREWS COAL CO.		MCDOWELL	ORCHARD BRANCH MINE	96.60	10	
U-4040-86	VIRGINIA CREWS COAL CO.	PO BOX 727, IAEGER, WV 24844	MCDOWELL	ZACKS BRANCH NO. 1	10.80	20	
U-4008-87	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	WYOMING	DELAWARE NO. 2 MINE	3.20	20	46-05246
U 4007 87	VIRGINIA CREWS COAL CO.	BOX 727, IAEGER, WV 24844	MCDOWELL	DAY CAMP NO. 1	12.00	20	
S-4021-87	VIRGINIA ENERGY COMPANY	BOX 430, CLINTWOOD, VA 24228	MCDOWELL	BULL CREEK STRIP #2	8.46	10	
S-4002-87	VIRGINIA ENERGY COMPANY	P.O. BOX 430, CLINTWOOD, VA 24228	MCDOWELL	BULLCREEK STRIP	78.83	10	
S-4001-88	VIRGINIA ENERGY COMPANY	BOX 430, CLINTWOOD, VA 24228	MCDOWELL	MUD FORK STRIP #1	70.30	10	
S-1045-87	VMS, LTD.	PO BOX 519, GRANVILLE, WV	MONONGALIA	TRICKETT TRACT MINE # 1	182.00	10	46-07427
S-6001-88	VMS, LTD.	P.O. BOX 519, GRANVILLE, WV	CLAY	POPLAR LICK SURFACE MINE	27.00	10	
S-1013-88	VOLKSTONE COMPANY	P.O. BOX 97, REEDSVILLE, WV 26547	PRESTON	GREENHOUSE TRACT	18.00	10	
S-1024-89	VOLKSTONE COMPANY	PO BOX 97 REEDSVILLE WV 26547	PRESTON	DAVIS TRACT	18.00	10	
S-54-85	W & G CONSTRUCTION		FAYETTE		220.00	10	
S-97-84	W & G CONSTRUCTION CO.		FAYETTE		54.00	10	
U-29-84	W & P COAL CO.	BOX 570, OMAR, WV	LOGAN		5.38	20	
255-74	W & S COAL CO.		MARION	CURNUTTE TRACT	32.00	10	
S-53-81	W & S COAL GROUP	PO BOX 132, OAK HILL, WV 25901	BOONE	MOUNTAIN TOP SITE NO. 1	110.00	10	46-0634
43-81	W-P COAL CO.	POBOX 570 OMAR WV 25638	LOGAN		76.50	10	
D-1-81	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN	NO. 26	7.70	20	46-06375
D-2-81	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN		9.54	20	
O-44-84	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN	STIRROT PLANT	162.70	31	46-02832
U-161-83	W-P COAL CO.	BOX 570, OMAR, WV 25638	LOGAN		14.97	20	
U-188-83	W-P COAL CO.	BOX 570, OMAR, WV	LOGAN		0.80	20	
U-197-83	W-P COAL CO.	P O BOX 570, OMAR, WV 25638	LOGAN		0.75	20	
U-218-83	W-P COAL CO.	P O BOX 570, OMAR, WV 25638	LOGAN		0.60	20	
U-7-83	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN		11.02	20	
U-84-83	W-P COAL CO.	BOX 570, OMAR, WV 25638	LOGAN		4.16	20	
UO-523	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN		7.89	20	46-03845
D-37-82	W-P COAL CO.	PO BOX 570, OMAR, WV	MINGO		8.70	20	
U-5028-86	W-P COAL CO.		LOGAN	#27 MINE	4.60	20	
U-5063-87	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN	MINE NO. 35	4.70	20	
U-5078-87	W-P COAL CO.	PO BOX 570, OMAR, WV	LOGAN	NO. 36	6.16	20	
U-5010-87	W-P COAL COMPANY	PO BOX 570, OMAR, WV 25638	LOGAN	MINE NO. 28	1.80	20	
U-5034-88	W-P COAL COMPANY	P.O. BOX 570, OMAR, WV 25638	LOGAN	MINE NO. 37	1.76	20	

PERMIT NUMBER	COMPANY NAME	ADDRESS	COUNTY	MINE NAME	ACRES	TYPE FAC	MSHA I
U-1-84	W-P COAL COMPANY	GEN. DEL., OMAR, WV 25638	LOGAN	18-L	10.38	20	
U-5066-88	W-P COAL COMPANY	P.O. BOX 570, OMAR, WV 25638	LOGAN	MINE NO. 38	4.24	20	
U-5029-89	W-P COAL COMPANY	P.O. BOX 570 OMAR WV 25638	LOGAN	DEEP MINE NO 39	4.50		
S-1048-86	W.C. TONKERY COAL CO.		MARION	SWEEP RUN MINE	43.20	10	46-07008
S-1025-89	W.C. TONKERY COAL COMPANY	P. O. BOX 298 FAIRMONT WV 26554	MARION	HOG LICK	60.00	10	
0-89-83	W.W. MCDONALD LAND COMPANY	P.O. BOX 1706, LOGAN, WV 25601	LOGAN	LANDVILLE LOADOUT	3.59	34	46-05661
S-5046-88	WAR EAGLE CONSTRUCTION CO	PO BOX 361 GILBERT WV 25621	LOGAN	SURFACE MINE NO. 1	76.52	10	
U-5043-86	WAR EAGLE CONSTRUCTION COR	PO BOX 1099 GILBERT WV 25621	LOGAN	MINE NUMBER 0-21	10.00	20	
U-6-85	WAR EAGLE CONSTRUCTION INC	PO BOX 361 GILBERT,WV 25621	LOGAN	MINE 32	3.22	20	46-07270
0-17-85	WASHED FOSSIL FUEL		MARION		38.50	31	
S-1059-86	WAYNE K. BAKER		MONONGALIA	PITTSBURGH, WELTNER PERMI	13.80	10	
S-1024-87	WAYNE K. BAKER	PO BOX 114, POINT MARION, PA	MONONGALIA	PITTSBURGH,WELTNER PERMIT	30.50	10	
1-736	WEIRTON ICE & COAL CO.	401 PENN. AVE WEIRTON WV 26062	BROOKE		16.00	34	
0-41-85	WEIRTON ICE & COAL SUPPLY		BROOKE		5.80	34	46-02775
U0-247	WELCH MINING CO.	BOX 295, BLUEFIELD, WV	MCDOWELL		11.52	20	
S-2003-86	WERNER MINING CO., INC.		BARBOUR		43.00	10	46-07100
S-2013-86	WERNER MINING CO., INC.		BARBOUR	GOLDEN EAGLE - BARBOUR #2	61.20	10	
U-2032-88	WEST LEATHERWOOD MINING IN	BOX 751, WEBSTER SPRINGS, WV 26288	WEBSTER	NO. 1 MINE	10.00	20	
S-93-82	WEST VIRGINIA COALS, INC.	PO BOX 630, CLARKSBURG, WV	NICHOLAS		137.00	10	
140-77	WEST VIRGINIA ENERGY		BROOKE	J & M PROELLOCHS	45.40	10	46-05962
191-78	WEST VIRGINIA ENERGY		BROOKE	WHEELING PITTSBURGH	85.60	10	46-04962
52-81	WEST VIRGINIA ENERGY	PO BOX 2033, WINTERSVILLE, OH	BROOKE	61 STRIP	110.10	10	46-04762
73-81	WEST VIRGINIA ENERGY	PO BOX 2033, WINTERSVILLE, OH	BROOKE	61 STRIP	67.20	10	46-04962
92-79	WEST VIRGINIA ENERGY		BROOKE		128.20	10	46-04762
0-32-83	WEST VIRGINIA ENERGY	PO BOX 2033, WINTERSVILLE, OH	BROOKE	FOLLANSBEE DOCK	6.10	34	
S-20-83	WEST VIRGINIA ENERGY	PO BOX 2033, WINTERSVILLE, OH	BROOKE	62 STRIP	82.30	10	46-06054
S-26-84	WEST VIRGINIA ENERGY	PO BOX 2388, WINTERSVILLE, OH	BROOKE		49.10	10	46-04962
S-41-84	WEST VIRGINIA ENERGY	PO. BOX 2388, WINTERSVILLE, OH	BROOKE	NO. 61 STRIP	47.70	10	46-04962
S-45-82	WEST VIRGINIA ENERGY	PO BOX 2033, WINTERSVILLE, OH	BROOKE	61 STRIP	198.30	10	46-04962
29-80	WEST VIRGINIA ENERGY	POBOX 2388 WINTERSVILLE OH	OHIO	62 STRIP	114.40	10	46-06054
82-81	WEST VIRGINIA ENERGY	PO BOX 2388, WINTERSVILLE, OH	OHIO	LOUIAW PAFE	67.20	10	46-06054
S-67-82	WEST VIRGINIA ENERGY	POBOX 2388 WINTERSVILLE OH	OHIO	WALKER	60.90	10	46-06054
S-72-84	WEST VIRGINIA ENERGY		OHIO	MINE 62 STRIP	189.40	10	46-06054
S-55-85	WEST VIRGINIA ENERGY		BROOKE		78.50	10	46-04762
S-1018-86	WEST VIRGINIA ENERGY INC.		BROOKE		170.80	10	
S-1072-86	WEST VIRGINIA ENERGY, INC.	POBOX 2388 WINTERSVILLE, OH	BROOKE	SANFORD #3	5.40	10	
S-1012-87	WEST VIRGINIA ENERGY, INC.	P.O. BOX 2388, WINTERSVILLE,OH	OHIO	AIRPORT WEST #11, MINE 62	179.60	10	
S-1071-86	WEST VIRGINIA ENERGY, INC.	PO BOX 2388, WINTERSVILLE, OH 43952	BROOKE	G.I.Y. #12 MINE 62	141.90	10	46-04762
85-81	WEST VIRGINIA RECLAMATION	PO DRAWER A, GASSAWAY, WV	BRAXTON		80.00	10	
EM-40	WESTERN MINGO	PO BOX 119, NAUGATUCK, WV	MINGO	MINE NO. 1	41.70	20	46-05055
U-190-83	WESTERN MINGO COAL CO.	POBOX 119 NAUGATUCK WV 25685	MINGO		51.24	20	
U0-239	WESTERN MINGO COAL CO.	PO BOX 119, NAUGATUCK, WV	MINGO		40.00	20	46-05055
U0-327	WESTERN MINGO COAL CO.	PO BOX 119, NAUGATUCK, WV	MINGO		38.00	20	
0-34-84	WESTMORELAND COAL CO.	RT 1, BOX 38, CLOTHIER, WV	BOONE	BEAN HOLLOW	130.13	33	
P-3950	WESTMORELAND COAL CO.		BOONE		13.10	31	46-01292
U-151-82	WESTMORELAND COAL CO.	RT 1, BOX 39, CLOTHIER, WV	BOONE		6.77	20	
U-153-82	WESTMORELAND COAL CO.		BOONE	HAMPTON NO. 3	17.23	20	46-01283
P-3442	WESTMORELAND COAL CO.		FAYETTE	CLIFFTOP PREP PLANT	0.00	31	46-01305
0-105-82	WESTMORELAND COAL CO.	RT 1, BOX 39, CLOTHIER, WV	RALEIGH	ECCLES NO. 6	6.42	20	46-01514
0-95-83	WESTMORELAND COAL CO.	RT 1 BOX 39 CLOTHIER WV	RALEIGH	EULEES PLANT	130.44	31	
U0-219	WESTMORELAND COAL CO.	RT 1, BOX 39, CLOTHIER, WV	RALEIGH		34.00	20	46-05250
U-5099-86	WESTMORELAND COAL CO.	RT 1, BOX 39, CLOTHIER, WV	BOONE	HAMPTON NO. 41	17.36	20	
0-3084-87	WESTMORELAND COAL COMPANY	RT. 1, BOX 39, CLOTHIER, WV	RALEIGH	SWEENEYSBURG WATER TRIMNT	14.00	38	
S-5003-87	WESTMORELAND COAL COMPANY	RT. 1, CLOTHIER, WV 25047	BOONE	HAMPTON NO. 7 MINE	364.20	10	
S-5048-88	WESTMORELAND COAL COMPANY	RT. 1, BOX 39, CLOTHIER, WV 25047	BOONE	HAMPTON RE-MINING	436.82	10	46-03139

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S-5050-87	WESTMORELAND COAL COMPANY	ROUTE 1 BOX 39 CLOTHER WV 25047	BOONE	HAMPTON #47	604.39	10	
0-142-83	WESTON COAL PROCESSING	RT 3, BOX 38-L, WESTON, WV	LEWIS		26.00	33	
0-44-82	WESTON COAL PROCESSING	RT 3, BOX 382, WESTON, WV	LEWIS		8.50	31	
0-171-83	WESTRIDGE COAL CO., INC.	PO BOX 38, CRAIGSVILLE, WV	NICHOLAS		8.00	20	
0-46-85	WESTSIDE RIVER TERMINAL		MONONGALIA		10.00	34	
71-79	WETER CO.		PRESTON	CALE & MOLISEE	56.00	10	46-04275
0-14-82	WEVACO PROCESSING COMPANY	13905 MCCORKLE AV CHESPK WV	KANAWHA		147.96	33	
0-91-83	WEVACO PROCESSING COMPANY	13905 MACCORKLE A,CHESAPEAK,WV	KANAWHA		23.10	38	
169-78	WHEELING ENERGY CO.	BOX 102 WHEELING WV 26003	BROOKE	BROOK COAL STRIP	52.00	10	46-06106
R-1-85	WHITCO		MCDOWELL		13.30	33	
R 4032-86	WHITCO., INC.		MCDOWELL		1.90	33	
S-5009-88	WHITE FLAME ENERGY, INC.	BOX 430, CLINTWOOD, VA 24228	MINGO	WHITE FLAME NO. 1 MINE	255.87	10	
S-5012 88	WHITE FLAME ENERGY, INC.	BOX 430, CLINTWOOD, VA 24228	MINGO	WHITE FLAME NO 1	258.24	10	46-07466
S-3040-86	WHITE RIDGE COAL CO.		RALEIGH		209.20	10	46-02297
103-75	WILLIFORD EXCAVATING		PRESTON	WILHEIM TRACT	35.00	10	
R-5077-86	WILLIS MARCUM TRUCKING CO.		LOGAN		10.75	33	
0-10-81	WINCHESTER COALS	POBOX 987 CHAPMANVILLE WV 2550	LINCOLN		56.00	33	
0-23-81	WINCHESTER COALS, INC.	405 CAPITOL ST., CHARLESTON, WV	LINCOLN		20.23	20	
0-52-83	WINCHESTER COALS, INC.	405 CAPITOL ST., SUITE 607, CHRLSTN	LOGAN	BIG CREEK LOADOUT	4.50	34	
EM-128	WINDSOR POWER HOUSE	WINDSOR HGHTS WV 26075	BROOKE		178.00	20	
P 744	WINDSOR POWER HOUSE	WINDSOR HGHTS WV 26075	BROOKE	BEECH BOTTOM	12.00	33	46-01286
U 4-85	WINDSOR POWER HOUSE COAL		BROOKE	SCHOOL HOUSE HOLLOW	4.70	33	46-01286
0-53-83	WINIFREDE RAILROAD COMPANY	13905 MACCORKLE AVE, CHESAPEAKE, WV	KANAWHA		22.60	38	
UD-138	WITCHER CREEK COAL		KANAWHA	B3	17.00	20	46-05486
0-77 82	WOCAP ENERGY RESOURCES, IN	POBOX 135 TERRA ALTA WV 26764	PRESTON		6.10	34	
S 26-85	WOCAP ENERGY RESOURCES,INC		PRESTON	OLAKER	40.00	10	46-07029
S 14-83	WOCAP ENERGY RESOURCES,INC	PO BOX 3320, MORGANTOWN, WV	PRESTON	MARY JANE	100.22	10	46-06042
R-526	WOLF CREEK CO.		BRAXTON		25.00	33	
0-81 83	WV TENNESS COAL SALES INC	BOX 192 BLUEFIELD WV 24701	MCDOWELL		2.60	38	
0 20-84	WV TENNESSEE COAL SALES IN	BOX 192 BLUEFIELD WV 24701	MCDOWELL	ALPHEUS PREP PLANT/REFUSE	322.00	31	46-02296
U 5074-87	[illegible] MINING COMPANY	BOX 568, MADISON, WV 25130	LOGAN	ME HOLLOW DEEP MINE	13.00	20	46-02517
8-81	Y-W-R COAL CO.		LEWIS	LIFE'S RUN	36.70	10	46-04481
S 101-83	Y-W-R COAL CO.	PO BOX 2452, CLARKSBURG, WV	LEWIS	LIFE'S RUN	70.00	10	46-04481
S-12-83	Y W-R COAL CO.	PO BOX 2452, CLARKSBURG, WV	LEWIS	LIFE'S RUN	66.60	10	46-04481
S-3036-86	Z Y COAL CO., INC.		NICHOLAS	LILLY BRANCH SURFACE MINE	114.00	10	
60-75	ZINN COAL CO.	POBOX 210 BRUCETON MILL WV 265	PRESTON	JACKSON FILE - HUGH	75.00	10	46-05632
91-79	ZY COAL COMPANY INC.	PO BOX 250 CLAY, WV 25043	CLAY	SURFACE NO. 3	64.00	10	
30-80	ZY COAL COMPANY, INC.	P.O. BOX 250 CLAY WV 25043	CLAY	SURFACE NO. 4	62.00	10	
70 79	ZY COAL COMPANY, INC.	P.O. BOX 250 CLAY WV 25043	CLAY	SURFACE NO. 2	51.00	10	
S-6028-88	ZY COAL COMPANY, INC.	P.O. BOX 250 CLAY WV 25043	CLAY	DUNDON NO. 2	195.37	10	

Total Records :3452

ENFORCEMENT STAFF

Chairman **Byrd**. Well, now what effect does the predominance of deep mining, as opposed to surface mining, have on the number of inspectors required and the frequency of inspections required?

Mr. **Snyder**. Well, there is no, I guess, national standard, hard and fast rule, which says for every underground mine you need certain things, or for surface mining you need certain things. There are many, many factors which go into our assessment of how many inspector personnel each State needs, and it has to do with the uniqueness of the State.

As just an example—and I will answer this in detail, Mr. Chairman, for the record, if you would like. But as a quick example, in the West we have very large surface mines that are scattered over vast distances, and it takes an inspector a lot longer to get to a mine, a lot longer to inspect a mine than perhaps it might in an Appalachian type State where the mines are located closer together and don't cover as big an acreage. There are many, many factors that go into that.

Chairman **Byrd**. Well, deep mines involve far less acreage, and would they not also require less inspection time, and cannot a deep mine be inspected in a matter of hours, whereas surface mines would take days to inspect?

Mr. **SNYDER**. Well, it depends on the size, of course, but whether it is an underground mine or a surface mine has no effect on how many times a year it must be inspected. We require an inspection frequency of 12 times a year for both mines.

Chairman **BYRD**. What I am saying is what impact does it have on the number of inspectors and on the inspection time.

Mr. **SNYDER**. I suppose it could have some small impact, but we don't consider that to be much of a factor because it takes 12 inspections a year for both kinds.

Chairman **BYRD**. Well, I come from a mining area.

Mr. **SNYDER**. Yes, sir; I'm aware of that.

Chairman **BYRD**. I am, of course, not a specialist in your field, but it would appear to me that less inspectors would be required where there are deep mining operations than where there is surface mining predomination.

Mr. **SNYDER**. I suppose you could make that argument, that it would require somewhat fewer. Yes, sir.

Chairman **BYRD**. Well, I'm not interested in just making the argument. I'm interested in trying to get to the bottom of this. I think the subcommittee needs to have some understanding of what is involved here. We are talking about, in a sense, apples and oranges, deep mines as against surface mines, when it comes to inspections. So, we need something more. It seems to me that your agency with its experience ought to be able to tell this committee whether or not, as a general rule, fewer inspectors are required where deep mining predominates.

Mr. **SNYDER**. Let me ask Mr. Tipton to give that a shot.

Chairman **BYRD**. All right. Mr. Tipton?

MINE INSPECTIONS

Mr. **TIPTON**. Mr. Chairman, on an average we do recognize that there is less time required to inspect the deep mines. However, the surface disturbances that are associated with deep mining in many cases are similar to those as with surface mines. The haul road inspections, the sediment control structures that control the runoff from the faced-up areas and the haul roads do require extensive walk-outs. So, although there is a difference and we have factored those differences, based upon the numbers that the Director just presented, in the estimates that we have discussed with the State of West Virginia on their need for inspectors.

WEST VIRGINIA PROGRAM

Chairman **BYRD**. Has OSM ever responded to the West Virginia Department of Energy's analysis which takes issue with the 62 of the 84 uncited violations that were identified in the OSM annual evaluation of the West Virginia regulatory program?

Mr. **SNYDER**. Mr. Tipton?

Mr. **TIPTON**. Mr. Chairman, we have with each of our States what we call action plans which denote the findings of our annual oversight reports. We sit down and discuss with the States how to address each of the findings from those inspections. And many times we agree on those. Sometimes we don't. But those are in the process of negotiation and resolution.

Chairman BYRD. So, your answer is no.

Mr. TIPTON. No, sir; I'm not saying that we have resolved all of the issues or accepted all of the findings from West Virginia.

Chairman BYRD. I will read the question again. Has OSM ever responded to the West Virginia Department of Energy's analysis which takes issue with the 62 of the 84 uncited violations that were identified in the OSM annual evaluation of the West Virginia regulatory program?

Mr. TIPTON. I would have to respond for the record for that.

Chairman BYRD. Does anybody know?

Mr. SNYDER. We're not aware either way, Mr. Chairman.

Chairman BYRD. Can you find out on the telephone? Can you call downtown and find out? Try that.

Mr. SNYDER. Someone will call and see.

Chairman BYRD. We shouldn't have to wait for the record for an answer.

Mr. SNYDER. Mr. Chairman, may I add a footnote here? With respect to the number of inspectors in West Virginia, West Virginia and we are in agreement on the number they need. I do not know if the Senator is aware of that or not. We have agreed on a number of 80, and they have requested funding. They are a part of the funding in their 1992 budget request for 80 inspectors, and we have agreed with that.

OSM INSPECTIONS

Chairman BYRD. Why does it take on average 72 days for the OSM to inspect sites previously inspected by the State?

Mr. TIPTON. We only have seven oversight inspectors in West Virginia and although we make efforts to do our complete inspections as closely related to the State inspectors as we can, in large States with a large number of units, it is very difficult to synchronize the timing on it. We have made efforts to do joint inspections with the State of West Virginia, which will cut down on that significantly.

Chairman BYRD. You only have seven inspectors in West Virginia?

Mr. TIPTON. Yes, sir.

Chairman BYRD. Do you need more? Wouldn't it cut the average number of days down?

Mr. SNYDER. Well, doing the joint inspections, Mr. Chairman, is going to cut that down. And we are now in the process of doing that with West Virginia.

Chairman BYRD. What about the answer to my question?

Mr. SNYDER. Do we need more?

Chairman BYRD. Yes.

Mr. SNYDER. I honestly don't know.

Mr. TIPTON. We haven't planned to put more in in West Virginia.

Chairman BYRD. That's not the question, whether or not you have planned to. Do you need more? If you do need more, why don't you provide them?

Mr. **Snyder**. We will if we make the determination that we need them.

Chairman **Byrd**. Is it a matter of funding? Is that the problem?

Mr. **Snyder**. It could be, although I am not sure one or two or three or five more inspectors would be a significant budgetary issue. We could shift some personnel perhaps from some other States.

Chairman **Byrd**. That then would prejudice the other States, wouldn't it?

Mr. **Snyder**. Well, perhaps. As circumstances change in various States, backlogs get taken care of, mining activity reduces. We might be in a position to move one or two inspector personnel into another State, or in some cases, Mr. Chairman, we could move them on a temporary basis if the need arises.

Chairman **Byrd**. Well, you are a new man in this job and I don't envy your problems. But there are responsibilities here, and you're going to have the responsibility of finding out where there are problems and what can be done to fix them. And we want to cooperate here at this subcommittee level. But, obviously, you are not in a position yet to answer these questions. I think that there are some things that you ought to take a look at. Some people in your agency should be able to help you with these.

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. And they have been on board a while.

APPLICANT/VIOLATOR SYSTEM

The applicant violator system is an automated system available to the States to identify operators who have title IV or title V debt and/or have unabated permit violations. Using the AVS, the States can identify delinquent operators and subsequently deny new mining permits or suspend or revoke active permits until all violations have been abated and debts recovered. OSM is obligated to serve as the central inventory point for all State and Federal violators and their owners and controllers.

On January 24, 1990, OSM and the Department of the Interior entered into an agreement with the National Wildlife Federation pursuant to Federal litigation. The Department and OSM agreed to substantially improve the AVS.

Have the primacy States filed an amicus brief objecting to the settlement agreement and asking the court to include them in the settlement negotiations?

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. So, they have filed.

Mr. **Snyder**. Yes, sir; they have.

Chairman **Byrd**. When was that done?

Mr. **Snyder**. Actually I think they filed a motion to intervene and filed a brief in support of that motion, Mr. Chairman. When was it filed?

Chairman **Byrd**. Yes.

Mr. **Snyder**. I want to say sometime in February, March. I'm not sure of the exact date, but it was after the agreement was signed by the Secretary.

Chairman **Byrd**. You might indicate the answer for the record.

Mr. SNYDER. Yes, sir.

[The information follows:]

AMICUS BRIEF

States filed amicus brief on March 30, 1990.

APPLICANT/VIOLATOR SYSTEM

Chairman BYRD. What will be the additional costs incurred by the primacy States as a result of the settlement with the National Wildlife Federation?

Mr. SNYDER. We estimate for the States and the Indian tribes a total cost of about $2.1 million.

Chairman BYRD. That's $2.1 million.

Mr. SNYDER. Yes, sir.

Chairman BYRD. That is over the next 2 years, is it?

Mr. SNYDER. No; that is for fiscal year 1991.

Chairman BYRD. What will it be over the next 2 years?

Mr. SNYDER. We anticipate the cost in the second year to be somewhat less, but not substantially. So, I assume the cost will be about $4 million over the next 2 years.

Chairman BYRD. What will be the additional cost to West Virginia that would result from this settlement?

Mr. SNYDER. We estimate about $529,000.

Chairman BYRD. This year?

Mr. SNYDER. In 1991.

Chairman BYRD. In 1991.

Mr. SNYDER. Yes.

Chairman BYRD. What would be the additional cost over the next 2 years?

Mr. SNYDER. About twice that much, perhaps a little less in the second year. Some of the first year costs are associated with equipment and a kind of data verification that will not have to be an ongoing responsibility. So, we think the costs will go down.

Chairman BYRD. Are these figures that you are citing here the total cost or are these the States' share?

Mr. SNYDER. It's the total cost.

Chairman BYRD. The total cost.

Mr. SNYDER. Yes.

COST SHARING AVS

Chairman BYRD. What would be the additional cost to West Virginia that will result?

Mr. SNYDER. Well, on a 50-50 basis—the $529,000 is the total, and we would match half of that, one-quarter of a million dollars.

Mr. TIPTON. One-quarter of a million dollars per year.

Chairman BYRD. Is this an example of how OSM nurtures its partnership approach with the States?

Mr. SNYDER. Well, we believe that the cost sharing for all of the enforcement activities in primacy States is governed by section 705 of the Surface Mining Act which forbids us, Mr. Chairman, from exceeding a 50-percent match. As I think I indicated to you earlier, I am not opposed for paying more than that. I don't think I am authorized to.

Chairman **Byrd**. From the States' standpoint, I think we can understand how they feel, that they have been had. The primacy States were not allowed to participate in the settlement negotiations. At least I am advised of that. And they feel they were not consulted regarding the results, and they feel they have been saddled with additional responsibilities and the costs associated with those responsibilities, in connection with negotiations for which they had no part.

Mr. **Snyder**. Yes; I'm aware that some States feel that way. I think the majority of States perhaps do not share that view as intensely as some of them do. They were not a party to the lawsuit, Senator, and that is why they were not involved in the settlement of the lawsuit.

Chairman **Byrd**. But they are going to have to ante up.

Mr. **Snyder**. Some additional resources will be required for their participation. Yes, sir.

Chairman **Byrd**. And they feel they were not consulted regarding the results.

Mr. **Snyder**. Well, they were consulted. They were consulted. They were briefed on a weekly basis. They had two representatives from the State group in the room during the negotiations. They did not sit at the table, but they were there.

Chairman **Byrd**. They did not have any participation in the discussions.

Mr. **Snyder**. Well, Mr. Tipton was involved in those negotiations, Mr. Chairman, and he can respond to that more directly.

Mr. **Tipton**. Mr. Chairman, they were in the room, and it may not be characterized that they had a vote on the outcome, but they participated very actively throughout the negotiations. We had several meetings with a larger group of States to apprise them of results. And I feel comfortable that we worked out many of the technical concerns of the settlement agreement and distilled it back to—whereas the requirements were identified as coming from existing rules that OSM had promulgated over the past several years and not from the settlement agreement itself, the States concerned seemed to be focused on the funding level, whether it be 100 percent or 50 percent, and not on the technical merits of the agreement.

TECHNICAL INFORMATION PROCESSING SYSTEM

Chairman **Byrd**. Has OSM provided the necessary software and training required by West Virginia to fully implement and utilize OSM's technical information processing system [TIPS]?

Mr. **Tipton**. Yes, sir; we believe we have. We recognize that the technical information processing system, better known as TIPS within our agency, is a very good vehicle for technical assistance to the States. And we worked extensively with West Virginia and their equipment in trying to make it as fully compatible with TIPS as possible.

Chairman **Byrd**. I understand that West Virginia requested assistance with new software and technical training for the staff. Has the OSM provided either?

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. It has. Both?

Mr. **Snyder**. Yes, sir; and we are in the process of scheduling additional training. We have worked real hard. They bought some equipment that was not compatible, and our people have had to work extra hard to try to help them get over that problem. We even sent some of the equipment out to our technical center in Denver to try to reprogram it.

AML GRANTS

Chairman **Byrd**. The fiscal year 1991 request for state AML reclamation grants is $117 million——

Mr. **Snyder**. Yes, sir.

Senator **Byrd** [continuing]. Which is $33 million below the fiscal year 1990 appropriated level of $150 million, a decrease of 22 percent.

The revenues required for the AML are generated from a tax that is levied on every ton of coal produced. Currently coal operators pay $220 million into the AML fund every year. The unappropriated balance in the AML currently exceeds $500 million. The States depend on funds provided through the AML to reclaim lands affected by past coal mining. According to the latest quarterly report prepared by OSM for the period ending December 31 of last year, the States are obligating their construction grant funding at a rate of 82 percent.

Given the enormity and the importance of the task confronting the States in order to perform necessary reclamation work, and given the steady and significant progress that the States have achieved in improving their obligation rates, why does your fiscal year 1991 budget request propose a $33 million reduction in State AML reclamation grants?

Mr. **Snyder**. Mr. Chairman, there are several reasons for this. Let me say generally it's the position of the administration that in order to deal with deficit reduction, that moneys which have low likelihood of being expended in the fiscal year for which they are appropriated, should not be appropriated. And the $33 million decrease represents the amount of money from the prior year $150 million appropriation that the States failed to spend and, therefore, still have available to them. If you add that back to the $117 million that we are requesting be appropriated in 1991, it will be $150 million.

Chairman **Byrd**. The States are currently obligating at a rate of 82 percent. What do you consider an acceptable obligation rate?

Mr. **Snyder**. Well, that is certainly an improvement over prior years, and as all the States get more and more experience in these matters, we think that their ability to expend Federal funds allocated for certain projects will continue to improve. I do not know that we have any magic number in our minds that we would consider to be acceptable.

And these State programs, Mr. Chairman, vary in their size dramatically. Pennsylvania, West Virginia have large AML programs. Some other States have very small programs, Illinois, Iowa, some of these other States. And a 75-percent rate in a $100 million program is I think probably more acceptable than an 80 percent rate in a $2 million program. Some of these States have a lot of projects going on and a State procurement process that is kind of slow. We don't want to penalize any State, and we do not use obligation rates as a part of our formula for allocating these funds in any event.

AML GRANTS

Chairman **Byrd**. What is your estimate of the time generally required for States to complete a reclamation project from the planning phase through the completion of construction?

Mr. **Snyder**. They have 3 years in which to do that.

Chairman **Byrd**. And that's according to the law.

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. But what is your estimate of the time generally required?

Mr. **Snyder**. I don't know.

Chairman **Byrd**. Are they running 3 years? Dr. Wahlquist, do you know?

Mr. **Wahlquist**. There would be a substantial variation on that, Mr. Chairman. Some small projects will be done in a fairly short time where other projects may take a year or more to design, and then the construction phase may take 1 to 2 years. So, there would be a wide range depending on the nature and the type of project.

Chairman **Byrd**. Is it fair to assume that only a portion of an individual project grant will be obligated during the planning stage?

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. Would it not seem prudent then that the full amount of a project's grant is not obligated until the planning has been completed, and if that's the case, then shouldn't the States be given credit for this instead of being penalized for not obligating the money faster?

Mr. **Snyder**. Well, I do not know that they are being penalized, Mr. Chairman, but I agree with you that they should not be.

Chairman **Byrd**. Well, if projects take 2½ to 3 years to plan and implement, don't they need the funding on a consistent basis?

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. When a State enters the planning phase of a project and earmarks funds for construction, those funds are not available then for other projects. Right? If it earmarks the funds for construction, they shouldn't be available for other projects. That just makes good sense, doesn't it?

Mr. **Snyder**. I would say that they are probably not if they are in fact obligated by account or by contract. They are probably not available for other projects.

Chairman **Byrd**. It would be a very irresponsible way than it would seem otherwise.

Mr. **Snyder**. Yes; it would.

AML GRANTS

Chairman **Byrd**. OSM states in its most recent quarterly report that $221 million of the $404 million in unobligated balances has been awarded to the States in specific reclamation grants. While this money is not obligated, it is committed to specific projects. Would you agree?

Mr. **Snyder**. Yes, sir.

Chairman **Byrd**. According to OSM, the remaining $183 million was not allocated to the States until the end of the first quarter because of uncertainties regarding the effect of the Gramm-Rudman-Hollings sequester. The States are not in a position to make grant requests for projects without first receiving their allocations from OSM. In fact, $150 million of the $183 million is money that had been just appropriated, but which OSM has yet to allocate. Is that correct?

Mr. **Snyder**. At that time, yes, sir.

Chairman **Byrd**. Well, OSM hasn't allocated it as yet, has it?

Mr. **Snyder**. Yes, sir; we are in the process of allocating it in this fiscal year.

Mr. **Wahlquist**. It was allocated.

Chairman **Byrd**. Well, how does it come that you have this big unobligated balance?

Mr. **Snyder**. The $439 million, Mr. Chairman?

Chairman **Byrd**. Yes.

Mr. **Snyder**. Well, that was a combination of the $150 million, the $230 million something in State accounts, $32 million from the prior year that they failed to spend. It was a carryover. And the only reduction that the administration has made is the $32 million which is still available to those States and unallocated. In effect, Mr. Chairman, they have $150 million available to them with the $117 million plus the $33 million.

Chairman **Byrd**. They cannot make any of that unobligated balance available for new project starts, rather than the projects that are already underway, can they?

Mr. **Wahlquist**. All of the money available in the 1990 allocations will be available for new projects. That would be $150 million, plus we would presume much of the $33 million that was a carryover would also be available for new projects.

STATE OBLIGATIONS

Chairman **Byrd**. OSM was required by language contained in the fiscal year 1990 conference report accompanying Public Law 101-121 to report to Congress approaches for improving the States' grant obligation rates. That report concluded as follows: "Grant awards made at the end of a fiscal year quarter unfairly distort the statistical analysis of the States' obligation rate."

Would you explain that?

Mr. **Wahlquist**. We would recognize that the time that a grant award is made does make a difference in terms of how that obligation rate is reported because for a grant that has just been awarded, obviously, the obligation rate is going to be very low for that new grant. One of the things that we have done discussing with the States in contemplating is how we develop that obligation rate information as we report to Congress because that is a rate that is provided at the congressional request. It is not a factor that we particularly used in developing what our appropriation requests are.

But back to the point, we are looking at ways that would enable us to report the obligation rate in a way that might be that the States would consider more fair and appropriate.

AML GRANTS

Chairman **Byrd**. How much was requested for the State reclamation grant program?

Mr. **Snyder**. Our request is $117 million.

Chairman **Byrd**. Not $138 million?

Mr. **Snyder**. That was the initial request, yes, sir.

Chairman **Byrd**. What is meant by initial request?

Mr. **Snyder**. That was apparently a request made by OSM when they began some 18 months ago or so preparing the fiscal year 1991 budget request.

Chairman **Byrd**. The $138 million was requested at the departmental level?

Mr. **Itteilag**. Yes, Mr. Chairman.

Chairman **Byrd**. How much was requested at the OMB level?

Mr. **Itteilag**. We requested $138 million.

Chairman **Byrd**. And it has been reduced to what figure?

Mr. **Snyder**. It's $117 million.

Chairman **Byrd**. Why do you bunch your grant awards at the end of the fiscal year?

Mr. **Snyder**. Dr. Wahlquist?

Mr. **Wahlquist**. Grant awards are made in response to grant requests. I don't know that there is a particular effort to bunch them at the end of the year. It is more a timing of the processing of the grant requests as they come in. If they happen to follow in that sequence, that is more of a coincidence than anything by design.

Mr. **Snyder**. Mr. Chairman, there is also a difference in the Federal fiscal year and the State fiscal years, and that gives us a little bit of a problem from time to time because the budget cycles do not correspond.

Chairman **Byrd**. Does this serve to distort the picture of a State's unobligated balance and rate?

Mr. **Wahlquist**. It might distort that picture at the beginning of the very next quarter. We report those on a quarterly basis. So, if we had a number of new grants that were issued toward the end of a quarter, then at the beginning of the next quarter, that would show immediately a lower obligation rate. That's true.

AML INVENTORY

Chairman **Byrd**. The conference report accompanying the fiscal year 1989 appropriations bill directed the OSM to:

> Conduct a thorough review and revision, as appropriate, of the existing AML inventory. This process should be designed to apply standard definitions, guidelines and cost factors where applicable to all projects in the inventory.

The purpose of the inventory review was to restore credibility to the inventory which the Congress felt should be an important tool in allocating the Secretary's discretionary share of the AML funds to the States. Historic coal production alone is simply not a sufficient indicator of where the priority needs for reclamation assistance are located. As a result, it is necessary to have and to maintain an inventory of health and safety problems created by coal mining that is both accurate and credible. This is an essential prerequisite to an effective program.

What is the status of OSM's inventory review?

Mr. SNYDER. It is finished virtually, and I ought to be in a position to get that to the committee around the first of next month, Mr. Chairman.

Chairman BYRD. What can you tell the subcommittee regarding the results of the inventory review?

Mr. SNYDER. The highlights of the report that we are going to send you or just generally?

Chairman BYRD. Well, what are some of the results that you think are worth mentioning this morning?

Mr. SNYDER. I would ask Dr. Wahlquist, who is preparing the report, to address that for us.

Mr. WAHLQUIST. The inventory review effort looked at three of these some 15 odd categories that we have contained in the inventory. Those three categories comprised around 75 percent of the total or total dollar value in the inventory. They included dangerous high walls, underground mine fires and subsidence.

That effort included, first of all, developing new criteria based upon some field review, sending those new draft criteria out to the States for comment, factoring in the comments received back from the States upon those new criteria, and then taking those criteria and doing a field review of all of the sites that were contained in the inventory under those categories.

As a result of that effort, there has been substantial reduction in the costs within those three categories contained on the inventory, a reduction of some $2 billion or more. We can give you the specific numbers. I do not have those with me today, but it has led to a substantial reduction in the total costs associated with the inventory.

Chairman BYRD. What would West Virginia's share of the national inventory be?

Mr. WAHLQUIST. This reduced West Virginia's share of the total dollar value in the inventory on a percentage basis from around 40 percent to around 21 percent of the inventory, which is quite in line with West Virginia's historic coal production percentage of about 20 percent.

Chairman BYRD. And in dollar amounts, what is your finding on West Virginia's share?

Mr. WAHLQUIST. I will have to provide that number for the record, Mr. Chairman.

[The information follows:]

EFFECT OF AML INVENTORY REVIEW ON WEST VIRGINIA

As a result of the Inventory Review, the remaining unfunded West Virginia inventory decreased from $2.2 billion to $473 million. This decrease occurred primarily in the State's highwall inventory. Most of its highwalls were found to be too remote and isolated to present a serious, constant danger to the public. Even with this reduction, West Virginia has the second largest inventory of AML problems in the Nation. The total (funded and unfunded) inventory of West Virginia decreased from 40.4 percent of the National Inventory to 20.5 percent. West Virginia also ranks second nationally in historic coal production with 19.7 percent.

AML INVENTORY REVIEW

Chairman BYRD. How many States responded to the inventory review? How many States have concurred with the results?

Mr. SNYDER. All of the States have concurred with the results and we are still working out some specific sites with the State of Pennsylvania.

Chairman BYRD. Have these States expressed support for the review and confidence in the review?

Mr. SNYDER. Well, I think there was some earlier reluctance on the part of the States to do it at all. I think that is why we ended up having to do it ourselves, Mr. Chairman, but I think it is pretty well behind us now. They have either concurred with our findings or declined to comment with the exception of Pennsylvania, as I pointed out. Some of them objected to the method, but did not object to any specific sites that were excluded or categorized differently.

Chairman BYRD. Do you sense that they support using the inventory as a criterion for allocating the Secretary's discretionary share of the States' AML funding?

Mr. SNYDER. No, sir; I do not detect State support for that.

Chairman BYRD. While there remains a strong feeling among the States that there needs to be an accurate accounting of priority needs to better assess reclamation progress, it is my sense that the States do not like the inventory process.

Mr. SNYDER. That's right. They don't. They support historical coal production.

Chairman BYRD. How do you intend to demonstrate to the States and to the subcommittee that the inventory is, in fact, an accurate reflection of the priority reclamation needs?

Mr. SNYDER. Mr. Chairman, that's what we hope our report will cover when we send it to you.

Chairman BYRD. All right.

Well, I have some additional questions which I will submit for the record.

Mr. SNYDER. Yes, sir.

Chairman BYRD. Senator Reid, do you have some questions you would like to proceed with at this point?

Senator REID. Only those the chairman wishes to be pursued. I have none of my own, Mr. Chairman.

Chairman BYRD. All right.

I appreciate your willingness, Senator Reid, at this late moment to proceed with the questions from here out. So, I will submit them.

Thank you very much, Mr. Snyder.

Mr. SNYDER. I appreciate the opportunity.

Chairman BYRD. For your answers to the questions—there will be other questions submitted presumably for responses. If you could respond to those within 3 weeks.

Mr. SNYDER. Three weeks, yes, sir; with the understanding that the report on the AML inventory is previously scheduled. Our schedule calls for it to be June 1. There may be a little slippage, but it will be to you.

Chairman BYRD. All right, fine.

Senator Reid, thank you very much.

Senator REID [presiding]. Mr. Chairman, thank you.

AML EMERGENCY FUNDING

Mr. Snyder, in fiscal year 1989, the Office of Surface Mining requested a $3.5 million reprogramming from prior year recoveries of AML funds in order to allow for unforeseen emergency projects required as a result of heavier than usual winter and spring rains. This reprogramming was necessary because of the $9 million OSM had requested and that was appropriated for 1989 was insufficient to meet all the emergency project needs. We were assured that this was a special circumstance.

But OSM again requested funds for emergency projects for 1990, and again $9 million was appropriated. Has OSM been able to meet all of its emergency project needs within the fiscal year 1990 appropriation? And if not, what are the additional needs, and how do you intend to meet them?

Mr. SNYDER. At the current time, Senator Reid, we anticipate a shortfall for the balance of this fiscal year of approximately $6.5 million. And we are requesting a reprogramming of funds to enable to deal with those additional emergency projects totaling about that much.

Senator REID. Which States will be the source of these recoveries?

Mr. SNYDER. We are attempting to request reprogramming from carryover and unawarded grants in the States where the emergencies arise. I do not want to take it from one State and give it to another State. That creates another debate. So, we are trying to isolate those and make sure that the States that have the emergency problems under the Federal program use their available funds to cover that.

Senator REID. How does the Office of Surface Mining intend to reimburse the States for the amounts?

Mr. SNYDER. We will do that the way we did it this year. We would have to reimburse them off of the top from the new AML funds made available to the agency.

Senator REID. Are you always behind doing it that way?

Mr. SNYDER. Unfortunately, sir, that's true. We need to try to fix that, Senator.

APPLICANT VIOLATOR SYSTEM

Senator REID. The AVS is supposed to be the central repository of information maintained by OSM to allow for easy and quick identification of any operator who has any outstanding title IV or title V debts or any unabated violations and to provide automatic permit blocking. But this has not worked properly primarily because of the inaccuracy of the information collected and fed into the system. As a result, OSM has been under a Federal court order to fix the system and maintain it properly. A settlement was recently reached with the environmental parties to the suit.

I do not really know what that means.

Your testimony seems to indicate that OSM is satisfied with the settlement. Do the States agree with you?

Mr. **Snyder**. Well, the States would rather I think, Senator, perhaps rather not have had to do this at all.

Senator **Reid**. Were the States parties to the negotiations?

Mr. **Snyder**. They were in the room and took an active part in some of the discussions and, in fact, participated at a fairly detailed level on the technical aspects of this. They were not a party to the lawsuit. So, technically speaking, they could not be an official party to negotiating a settlement in a lawsuit to which they were not a party.

Senator **Reid**. What will be the States' role in implementing this agreement?

Mr. **Snyder**. They will have to implement their portion of it. They will be partners with us.

Senator **Reid**. This will cost the States money, and how will the States pay for this additional cost of over $1 million per year?

Mr. **Snyder**. We have requested about $1.1 million in 1991 for a 50-percent share of the total cost that we anticipate the States will encounter of about $2.2 million. We feel that under provisions of our act in section 705, we are not authorized to fund this at 100 percent, but only at 50 percent.

AVS FUNDING

Senator **Reid**. I understand some of the States are saying that if they do not receive the full Federal funding, they will not sign the revised memorandums of understanding.

Mr. **Snyder**. I do not know that any State is currently saying that, but we will certainly have to work with them and see what can be done.

Let me say for you, Senator Reid—I think I said it to the chairman earlier—I am not opposed to a 100-percent funding. I just do not think I am authorized to do it without the Congress saying so.

Senator **Reid**. Do you think report language directing OSM to provide full funding to the States would be adequate?

Mr. **Snyder**. No, sir.

Senator **Reid**. Do you think it would take bill language?

Mr. **Snyder**. Yes, sir.

Senator **Reid**. This year the request for AVS is almost $3 million, $2.9 million. How much has been spent to date?

Mr. **Snyder**. Historically, the whole lot of it?

Senator **Reid**. Yes; that's right.

Mr. **Snyder**. It's $14 million, give or take a few thousand dollars.

STATE REGULATORY GRANTS

Senator **Reid**. The fiscal year 1991 request for the state regulatory grant program is $47,910,000, an increase of $6 million, or about 14 percent.

Mr. **Snyder**. Yes, sir.

Senator **Reid**. The allocation, though, to West Virginia would be increased by about 20 percent. This grant must be matched on a 50–50 basis by the State. With $250,000 in additional costs that West Virginia will have to absorb starting in 1991 for AVS, how is West Virginia expected to continue to expand its inspector work force?

Mr. **Snyder**. We are optimistic, Senator, that West Virginia can meet its share of the additional resources required both for inspector personnel, as well as for AVS requirements. Their legislature took some actions that will lead to additional revenue in their program.

OSM TIPS SUPPORT TO STATES

Senator **Reid**. TIPS, as you are aware, is an automatic data processing system that provides a comprehensive set of automatic, technical and analytical tools to assist States' reviews of mining permits, reclamation plans, environmental assessments and to assist the States by providing other scientific and technical evaluations necessary for the administration of the Surface Mining Act. OSM is responsible for providing the computer hardware, basically the work stations, for maintaining the software and conducting the training needed to fully utilize the system for the States' staff.

This is a popular program. Unfortunately, there is growing evidence that the TIPS is being hampered by budget, staffing and administrative problems.

What is your response to the January 30, 1990, memorandum from Keith Kirk, Chief of TIPS, which concludes that because of fiscal year 1990 budget uncertainties and restrictions on travel, TIPS is slipping further behind schedule?

Mr. **Snyder**. Well, let me make a general response to that, Senator, and then I will call on Mr. Tipton for a detailed response, if you would like.

It is not just TIPS that is suffering from fiscal year 1990 budget problems. OSM is suffering from them. And TIPS is a very important technical and scientific program that we are very proud of, but our whole agency is having a pretty lean year.

Mr. Tipton, do you want to add any specifics to that?

Mr. **Tipton**. I would add that we have recognized TIPS as a very high priority within the agency for the good things and the good reception that it has had among the States. We feel that we have fully funded TIPS. And I have discussed the contents of Mr. Kirk's memorandum with him and feel that we have satisfactorily resolved that issue.

Senator **Reid**. But, of course, the program will not work if those who do administrate the program cannot travel.

Mr. **Tipton**. That's true. We have taken care of that.

Senator **Reid**. The memo also states that:

> A minimum of $816,000 is required to keep TIPS operational, to complete installation of TIPS work stations, and to provide entry level training to new TIPS users.

How much of your 1990 TIPS appropriation, which is about $900,000, are you applying to the program reductions required to cover your 1990 shortfall, which is about $400,000?

Mr. **Snyder**. Senator, let me try to respond to that for the record.

Senator **Reid**. I am told that it should be that much. Is that right?

Mr. **Snyder**. My people tell me that TIPS is fully funded for this year. Let us take a look at that and respond to that question for the record.

[The information follows:]

TIPS

In fiscal year 1990 TIPS has been fully funded at a level of $898,000. OSM will continue to provide, at no cost to the States in fiscal year 1990, equipment upgrades, softwear upgrades, training, travel and Federal Telephone System data lines accessing the minicomputer in Denver.

OSM planned to allocate an additional $400,000 during fiscal year 1990 for the replacement of the main TIPS computer; however, it appears that replacement can be postponed until the next fiscal year.

TIPS

Senator REID. Specifically what happens to States like West Virginia with the shortfall here?

Mr. SNYDER. We do not think there is any impact so far. I think Mr. Kirk is afraid there will be, not that there has been.

Senator REID. Then there has not been yet——

Mr. SNYDER. We fully funded TIPS. It is funded at a level of $898,000.

FISCAL YEAR 1990 SHORTFALL

Senator REID. The subcommittee has received the April 28, 1990, Inspector General's audit report on the agency's 1990 shortfall. The Inspector General has concluded that OSM may experience a budget shortfall, that is to say, OSM's operating costs will likely exceed its appropriated level by as much as $4.2 million.

How could this be allowed to happen?

Mr. SNYDER. It will not be, Senator. That $4.2 million is an older figure, several months old. Through several actions that we have taken, position freeze and several other things, we are reducing our projected deficit down to a level of probably about one-half million dollars. But we will continue to have to take a look and monitor this very closely and probably come to the committee with a reprogramming request to move money between accounts in order to make sure that we end the fiscal year and avoid any deficiency.

Senator REID. If you are able to do that using your statement, does that include reducing TIPS by $400,000?

Mr. SNYDER. No, sir.

Senator REID. Now, it is my understanding that you cannot move these accounts back and forth by simply reprogramming. I think it would take an act of Congress. Have you received any advice in that regard?

Mr. SNYDER. We cannot move between the two appropriations except by reappropriating funds by the full Congress. We can, however, reprogram between accounts in the same appropriation with the approval of the subcommittee.

Senator REID. When can we expect to see the reprogramming requests for these changes?

Mr. SNYDER. Very soon, a couple of weeks.

Senator REID. In looking at the status of fiscal year 1990 OSM operating budget, in the line to the far right it says cumulative reductions in order for your to get down to $730,000. Does somebody on your staff have this?

Anyway, on that in cumulative reductions, we have there $400,000 in TIPS.

Mr. SNYDER. That's about 3 months old.

Senator **Reid**. That's what we like to hear.

Your Budget Office has indicated that one of the most difficult costs for OSM to cover will be the $440,000 for the salaries and benefits of nine schedule C employees, and I note that five of the nine schedule C employees were brought on early in the first quarter of 1990. This was about the time you told us that you realized OSM would experience a shortfall in 1990.

Could you explain to the committee why these people were hired with the obvious budgetary problems that confronted the agency?

Mr. **Snyder**. Senator, would you repeat the very first line?

Senator **Reid**. You bet.

SCHEDULE C EMPLOYEES

Your Budget Office has indicated that one of the most difficult costs for OSM to cover will be the $440,000 for the salaries and benefits of nine schedule C employees.

Mr. **Snyder**. My Budget Office said that?

Senator **Reid**. Yes; I note that five of the nine schedule C employees were brought on early in the first quarter of 1990. This was about the time you indicated that OSM would experience a shortfall in 1990.

The question is then: why were these people hired given the budget problems that were obvious?

Mr. **Snyder**. Well, we didn't put a hiring freeze on, Senator, until about mid-November when we finally decided we did have a serious budgetary problem. I think one person was hired in September and one was hired in either October or November, but the bulk of those particular employees have been on the OSM payroll since the new administration took office. We have nine, and within the next couple or 3 weeks, three of those personnel will be off our payroll. So, we will be down to six schedule C's by about the first of June.

VOLUNTEERISM

Senator **Reid**. In January you issued a directive providing for the use of official duty hours for volunteer activities, and pursuant to your directive, employees were to be granted an excused absence of up to 4 hours every 2 weeks to participate in appropriate volunteer activities.

The question is: why should the taxpayers pay for Federal employees who volunteer their time?

Mr. **Snyder**. They shouldn't, and we have rescinded that.

Senator **Reid**. Do you know how long that was in effect?

Mr. **Snyder**. Two months.

Senator **Reid**. Mr. Snyder, there are some questions that Chairman Byrd indicated will be submitted to you in writing and you have indicated you will get those answers back in about 3 weeks. The committee appreciates your testimony.

Staff has told me that the Chairman wants one other question asked here, and I will flip right to it. You were going to respond for the record. Someone was checking this out.

WEST VIRGINIA PROGRAM

Has OSM ever responded to the West Virginia DOE's analysis which takes issue with 62 of the 84 uncited violations that were identified in the OSM annual evaluation of the West Virginia regulatory program?

Mr. WAHLQUIST. Based upon a telephone conversation that I have had with Jim Blankenship, our Charleston field office director, since the hearing began, there have been meetings with the State in which these issues have been discussed within the last 6 weeks, within the month of April, that there were some informal meetings in which feedback was given on the 62 violations. The outcome of those particular meetings I do not have any details on.

Senator REID. When will you have those details?

Mr. WAHLQUIST. It is my understanding that there was informal discussion, that there was some additional feedback that was given to State at that time, and that there has not really been any further follow-up from those meetings that were held in April in which these violations were discussed. We can generate some additional detail on those meetings, but at this point, that is all that we have.

Senator REID. Would you do what you can to find out what happened at those meetings and what is going to happen in the future and report to the committee on that?

Mr. WAHLQUIST. We will provide for the record a summary of those meetings.

Senator REID. Great.

[The information follows:]

SUMMARY OF OSM/WEST VIRGINIA MEETING ON VIOLATIONS STATE FAILED TO CITE

OSM oversight period was from July 1, 1989, through December 31, 1989.

Only 12 violations out of 101 violations requiring State enforcement action were cited.

Determination that a violation had existed and had been missed by State inspector was based on the professional judgment of the OSM inspector after review of State inspection records and discussing the violation with the State inspector.

State contended that, in many cases, OSM inspection was performed months after the State inspection and many of the violations were of such a nature that a determination could not be made that they had existed at the time of the State inspection.

OSM's inspectors conclusion that the State had not cited violations was supported by State's own inspection reports in many cases. Also, all cases were discussed with the State inspector and the opportunity to refute OSM's determination was given prior to completion of the OSM inspection report. West Virginia inspectors took issue with only four determinations.

No written response to the data was ever requested from or provided by the State.

ADDITIONAL COMMITTEE QUESTIONS

Senator REID. There will be some additional questions which we will submit to you for your response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Minimum Funding Program

Question: What is OSM's recommended program level for FY 1991?

Answer: OSM has recommended setting a level of $1.5 million as the funding to maintain minimum programs in FY 1991.

Question: What States are included in the minimum level program in FY 1990?

Answer: For FY 1990, the States of Arkansas, Iowa, Kansas, Maryland, Missouri, Oklahoma, and Utah received minimum program funding.

Question: Presuming that the minimum level for FY 1991 is calculated based on 1 percent of your FY 1991 request ($117 million), which States would fall into the minimum program level of $1.17 million for FY 1991?

Answer: Based on a minimum program level of $1.17 million and a grant appropriation of $117 million in FY 1991, the following States would be minimum level program States: Arkansas, Iowa, Kansas, Maryland, Missouri, Oklahoma, North Dakota, and Utah.

Question: Which additional States would be added if the minimum level is set at $1.5 million in FY 1991?

Answer: Based on a minimum program level of $1.5 million and a grant appropriation of $117 million in FY 1991, the States of New Mexico and Texas would be additional minimum program States.

Reauthorization

Question: The authority for the AML reclamation fees expires in August of 1992. You have stated in your testimony that reauthorization is necessary. Would you explain that statement?

Answer: Even after the fees collected through August 1992 are expended on AML reclamation projects, many problems resulting from coal mining prior to the enactment of SMCRA in 1977 still will not have been reclaimed. OSM estimates that $1.6 billion of priority 1 and 2 problems (problems impacting human health and safety) will have to be reclaimed after the AML fees collected through 1992 are expended. In addition, there are unknown but potentially large numbers of environmental (priority 3) problems to be addressed.

Question: What kinds of problems will remain and where will they be located?

Answer: Five types of problems make up over 75 percent of the priority 1 and 2 problems in dollar terms in the National AML Inventory:

1) Mine Fires, 2) Dangerous Highwalls, 3) Clogged Stream Lands, 4) Subsidence, and 5) Dangerous Piles or Embankments. These are expected to be the major problems remaining after the AML fees collected through 1992 are expended. Six States are projected to have $50 million or more each of remaining priority 1 and 2 problems:

Kansas
Kentucky
Ohio
Pennsylvania
Virginia
West Virginia

Question: Given OSM's estimates of fee collections ($259 million in 1991) and the extent of the unappropriated AML balance by the end of 1991 ($643 million), would you recommend that the fees continue at their present level --- $0.35 on each ton of coal produced from surface mining operations and $0.15 on coal from underground mines?

Answer: The Administration supports extension of the fee beyond 1992, although a position has not been taken on whether the fee should be modified.

Question: For how long?

Answer: The Administration supports extension of the fee beyond 1992, although a position has not been taken on the length of any extension.

Reconciliation of AML Funds

The FY 1989 Interior and Related Agencies Appropriations Act (P.L. 100-446) directed OSM to conduct an accounting and reconciliation of AML funds which have been granted to the States. You have stated in your testimony that the reconciliation is now complete.

Question: Have you received agreements from all the affected States regarding the State/Federal share reconciliation?

Answer: No we have not. Nineteen of the 27 States have concurred.

Question: If not, which States are you still working with and what are the remaining problems.

Answer: For the State/Federal Share Reconciliation a number of States were unable to concur due to a lack of records and as a result will neither agree nor dispute our findings. With the exception of Pennsylvania, no further action is required.

1. ARKANSAS was unable to concur due to a lack of records. No further action is required.

2. INDIANA was unable to concur due to a lack of records. No further action is required.

3. IOWA did not concur. No resolution can be found and this file has been closed. No further action is required. Iowa had a negative State share balance, and OSM's policy is not to recalculate prior year allocations. We believe the negative State share will be eliminated following the 1991 allocations. Iowa is a minimum program State receiving 100 percent discretionary Federal share funds. The negative State share balance has not adversely affected the State's minimum program status, thus allowing an annual $1.5 million discretionary share allocation.

4. KENTUCKY was unable to concur due to a lack of records. No further action is required.

5. LOUISIANA did not concur. No resolution can be found. This file has been closed, and no further action is required. Out of a $270,525 cooperative agreement award that was made to Louisiana, the State wanted 100 percent Discretionary share funding; however, OSM funded all but $8,762 in discretionary share funds. Since we cannot agree, the file has been closed and we are proceeding with the program.

6. MISSOURI did not concur. No resolution can be found, and the file has been closed. No further action is required. Missouri's concerns dealt with the State share balances. The State's share has been fully credited for the amount in dispute and will be reallocated to the State over time. The State did not lose any funds.

7. PENNSYLVANIA did not concur; however, we are working with the State to resolve this issue.

8. TENNESSEE was unable to concur due to a lack of records. No further action is required.

Question: Have all the affected States and Tribes concurred in the AML receipts reconciliation?

Answer: 16 of 27 States/Tribes have concurred with the receipts reconciliation.

Question: If not, which States have yet to concur?

Answer: We are awaiting a response to follow-up from the States/Tribe of Colorado, Maryland, Montana, Navajo Tribe, Oklahoma, and Pennsylvania.

Indiana, Kentucky, Ohio, and Tennessee were unable to concur due to a lack of records. No further action is required from these States.

In the case of Missouri, no resolution can be found and the file has been closed. Missouri will not agree with the reconciliation; however, they accept OSM's current policy for future allocations.

Question: When do you expect the reconciliation will be completed?

Answer: As previously stated all States have not concurred with the various reconciliations. We do not expect full agreement from all States due to a lack of records to dispute the findings. We will continue to work with the States to resolve issues where we can and where we cannot agree, and we will close all records with documentation noting decisions and proceed with current policy.

Through correspondence and telephone contact, issues were discussed and resolved. States provided a letter stating concurrence, non-concurrence or acceptance of the figures.

Emergency Projects

Question: OSM is again requesting $9.0 million in FY 1991 for emergency projects. Given recent history, do you intend to have OMB send up a budget amendment to your FY 1991 request for emergency projects?

Answer: No, I do not anticipate a budget amendment requesting an increase in the FY 1991 emergency request.

Question: If so, how much additional funding will you request for FY 1991?

Answer: I do not anticipate a budget amendment requesting an increase in the FY 1991 emergency request.

Rural Abandoned Mine Program (RAMP)

Question: Why is OSM proposing to eliminate the RAMP program?

Answer: The Administration is proposing to phase out the RAMP program in order to eliminate duplicative delivery mechanisms. The Administration believes it is best to use the State reclamation grants program as the primary delivery mechanism for reclamation services.

Question: The State of West Virginia receives between $2 and $4 million annually in RAMP assistance. Are you expecting West Virginia to stretch its existing staff and limited funds to pick-up this program?

Answer: In our opinion, the State of West Virginia has adequate staff to carry out its reclamation program, including rural projects.

Question: How does OSM intend to replace the 91 USDA FTE's and their expertise for handling the special problems of rural abandoned mine lands?

Answer: OSM would not replace the USDA FTE's. In order to qualify for primacy under the Surface Mining Act, States must possess a broad range of professional capabilities necessary to implement the Act in all required program areas. The States are capable of carrying out their reclamation programs, including rural projects.

Question: Will the OSM field staff simply take on new responsibilities?

Answer: Because of the capabilities of the States, OSM will not need to take on new responsibilities in carrying out rural projects.

Question: Why did you request the full FY 1990 appropriated level of $12 million for RAMP from OMB?

Answer: OSM requested the full appropriated level in an attempt to address Congressional add-ons. However, the Administration believes that utilizing only one delivery mechanism is preferable.

Applicant Violator System (AVS)

Question: What, if any, are OSM's obligations regarding the payment of legal fees associated with the AVS settlement agreement?

Answer: The settlement agreement does not obligate OSM to pay any attorney fees. The agreement clearly states in section 12.3 that nothing could be construed as an agreement by OSM to pay attorney fees and expenses, that any attorney fee claim would be governed by Section 520(d) of the Surface Mining Act (the Act's attorney fee provisions), and the parties would try to negotiate these claims, but if agreement cannot be reached, the matter will be submitted either to the court (for pre-settlement-agreement fees) or to an administrative tribunal (for post-settlement-agreement fees) for decision.

Question: How were these obligations determined?

Answer: The settlement agreement does not obligate OSM to pay any attorney fees.

Question: How much and to whom will these payments be made?

Answer: For the reasons explained above, the amount of fees to be paid, if any, and the timeframe for payment, have not yet been determined. Claims for fees have been submitted by the law firms of Galloway & Greenberg and Dow, Lohnes & Albertson, who represented the plaintiffs in the case.

Question: Over how long a period of time?

Answer: Any timeframe for payment, should there be any payment, has not yet been determined.

Question: What will be the source of funds for the payment of these legal fees?

Answer: Any fees that may be paid would come from the Judgement Fund, administered by the General Accounting Office under 28 U.S.C. 2414.

Question: What agreements resulting from the AVS settlement, if any, did OSM enter into regarding the purchase, lease or use of any new software requirements for the AVS?

Answer: The National Wildlife Federation (NWF) and Save Our Cumberland Mountains (SOCM) have agreed to make their system available to OSM, provided mutually satisfactory terms and conditions could be worked out. NWF and SOCM agreed that they would seek no monetary payment for OSM's use of the system per se. However, NWF and SOCM have reserved their right to petition under Section 520(d) of the Act for attorney fees and expenses for work performed in creating the system, but they intended to do that irrespective of OSM's decision either to use or not to use the NWF system. Likewise, OSM has not agreed to pay any attorney fees, irrespective of its decision either to use or not to use the NWF system.

The parties have not been able to conclude an agreement on terms and conditions for OSM's possible use of the NWF system. As an interim measure, the parties entered into a letter agreement on May 29, 1990, under which NWF and SOCM will provide OSM with the software for a 30-day demonstration and training period.

Question: How much will this cost and to whom will payments be made?

Answer: NWF and SOCM agreed that they would seek no monetary payment for OSM's use of the system per se. However, NWF and SOCM have reserved their right to petition under Section 520(d) of the Act for attorney fees and expenses for work performed in creating the system, but they intended to do that irrespective of OSM's decision either to use or not to use the NWF system. Likewise, OSM has not agreed to pay any attorney fees, irrespective of its decision either to use or not to use the NWF system.

Valid Existing Rights (VER)

Question: Is OSM planning to recommend a rule on valid existing rights this year?

Answer: OSM plans to publish a proposed rule on VER in 1991.

Question: If so, what will be the basis for this rule?

Answer: The proposal will be based on the language of the Surface Mining Control and Reclamation Act, the intent of Congress as expressed in the legislative history of the statute, applicable case law and administrative determinations, and the results of the national symposium on VER held in April 1990. The goal is to develop good public policy which balances protection for sensitive areas with the rights of private property owners.

Question: Will OSM be requesting funding to implement the VER rule or to satisfy any outstanding VER applications or requests?

Answer: At this time, OSM does not plan to request specific funding for implementation of the VER rule or for the processing of pending requests for VER determinations.

TIPS

Question: TIPS services are now provided to the States with no matching requirement. Is OSM intending to require a 50 percent match by the States for receiving TIPS services?

Answer: I intend to have each State using TIPS cost-share, consistent with regulatory and AML grants, the expenses associated with the repair/maintenance of the TIPS workstations and the cost of the local data phone lines that connect the TIPS Workstations to the GEONET telecommunications network, beginning in Fiscal Year 1991. Costs associated with equipment and software upgrades, travel, training, GEONET costs and operation of the TIPS minicomputer, will continue to be borne by OSM.

Question: How do you justify charging the States for TIPS services and what is your estimate of the additional costs to the States?

Answer: TIPS costs were fully covered initially to make the original equipment purchases, software acquisitions, and training. This has now been accomplished. TIPS is now an integral part of the State programs and as such is treated the same for funding purposes as any other part of the State programs. Under section 705(a) of the Surface Mining Act, grants shall not exceed 50 percent of the total State costs. Therefore, OSM funding of TIPS will be limited to 50 percent of the costs.

Based on two years of information on maintenance and phone line costs, it is estimated that the total cost of the local phone data line will be about $500 per year per State and the total cost of a repair/maintenance contract will be about $3,000 per year per State. These costs would be shared by the State in accordance with the applicable Regulatory or AML Grant funding arrangement.

Budget Shortfall

Question: What is the anticipated FY 1990 shortfall in each of OSM's accounts: regulation and technology and reclamation?

Answer: OSM anticipates a small surplus in the Regulation and Technology appropriation of $650,000 and a shortfall of $1.5 million in the Abandoned Mine Land appropriation.

Question: The Inspector General found that OSM had 78 more FTEs than allocated by the Department. How did this happen?

Answer: The FTE allocation given to OSM is a target rather than a mandated level. For several years, OSM has carried FTEs in excess of its target. OSM has recently instituted internal controls to address this issue and ensure that FTEs are managed wisely in the future.

Question: The Inspector General also found that OSM has been "living beyond its means" for some time. He found that OSM's recoveries and carryovers have gone from a high of $18.2 million in FY 1988 to a low of $2.2 million in FY 1990. Could you explain specifically what these recoveries and carryovers were used for and why the Subcommittee never received reprogramming requests for these expenditures?

Answer: OSM's carryover and recoveries are partially a function of the size of the appropriation. In earlier years, OSM had a much larger appropriation in the Federal Reclamation Operations subactivity. These larger appropriations coupled with fewer emergencies in some of these years resulted in larger carryovers. Recoveries have decreased over time as OSM personnel have gained experience in estimating project costs.

OSM's carryover and recoveries in this activity come from both operations and projects. These recoveries and carryover are used for both operations and projects. Specific use of specific carryover and recovery dollars cannot be made. However, all of the carryover and recoveries were spent in the subactivity in which they were appropriated. In FY 1990, OSM has kept the Subcommittee informed of the expenditures of carryover and recoveries in Federal Reclamation Projects, and OSM has made an internal decision that project recoveries and carryover will be spent on projects.

Question: Would you please explain each of the Inspector General's recommendations and identify specifically what you are doing to address each recommendation?

Answer: The Inspector General's recommendations are quoted below, and each is followed by our response.

1. Ensure that plans to cover the shortfall are accomplished in an expeditious manner, including reducing requirements for both the Regulatory Programs and the Reclamation Programs and, if necessary, initiating reprogramming actions and requesting supplemental appropriations for the Programs.

Response: The shortfall is being covered by reduced spending, reduced salary costs through a hiring freeze, and recovery of prior "no-year" funds and current year funds where possible. The Department will submit a reprogramming letter to the Appropriations Subcommittees based on the results of OSM's mid-year review. Careful monitoring of expenditures will be exercised for the balance of the fiscal year.

2. Establish a formal process to verify direct time charged to the two appropriations, such as requiring personnel to prepare time and activity reports. The practice of charging one appropriation for work related to the other appropriation should be discontinued immediately.

Response: OSM will do a test run during the summer utilizing a format similar to that used in the Wilkes-Barre Area Office (and cited in the audit) for employees who work under both appropriations to record actual time under each. The test run will provide information on the adequacy of format for consideration.

3. Charge administration or support costs directly to the appropriate Reclamation or Regulatory appropriation account based on actual work performed. In those instances where it is impractical on a direct charge basis, percentage allocations should be updated and documented based on a method that is supported by actual work performed in each office.

Response: A one month study of administrative/support operations will be conducted to determine -- as nearly as possible -- percentages of time utilized under both allocations. Study methodology will have to be developed, but could include the logging of staff time and adapting similar percents to non-salary costs in combination with actual known costs attributable to a given fund. OSM will implement the results of the study as appropriate.

4. Reduce operational resources to authorized levels.

Response: OSM is reducing FTEs through attrition and expects to meet its authorized target by the end of this fiscal year.

High Priority Projects in Non-Primacy States

Question: At the end of FY 1988, OSM indicated that $7.8 million remained in priority 1 and 2 projects in non-primacy States. OSM received an appropriation of $2.7 million for these projects in FY 1989 and yet, at the end of FY 1989, OSM still had a backlog of $7.3 million in these projects. The inventory was reduced by only $500,000. What did OSM do with the $2.7 million that was appropriated in FY 1989?

Answer: In FY 1989, OSM accomplished work on 29 high priority projects in 6 non-program States and 12 high priority projects on Federal and Tribal lands at a total cost of $1.6 million. $1.1 million was allocated to fund emergency project obligations in 1989 due to the high number of emergencies experienced in FY 1989.

Question: Please provide for the record a revised list of high priority projects that includes federal projects in program States.

Answer: OSM is currently updating this list and will be prepared to supply a revised list to the subcommittee by mid-July.

Official Uniforms

Question: My staff has received a copy of an anonymous letter to the Inspector General that states that you have procured white baseball caps with the new OSM logo for each OSM employee. This letter suggests that these caps will be part of some sort of "official OSM uniform." What items have been procured and at what cost?

Answer: OSM procured baseball caps with the new logo on it as a part of an employee incentive program to boost morale in the agency. GAO had approved the purchase of these types of items when used as a part of an employee incentive program. These caps are not, and never were, intended to be part of an official uniform.

They are being distributed to OSM employees to reinforce the Director's philosophy of working together as a team to accomplish the mutual goals of the agency. 1,200 caps were procured at a total cost of $6,360 or $5.30 per item. Competitive quotes were obtained before purchasing the caps.

Question: What was the source of funding for these items?

Answer: The source of funding for these items was OSM's regulation and technology appropriation which is the account that funds employee awards, training, etc.

OSM Reorganization

Question: Would you please describe your reorganization plan and what you hope to accomplish with this plan and specifically how this plan will enhance the ability of OSM to conduct its mission?

Answer: There have been several organizational changes in the history of OSM. As the mission of the agency has evolved, different organizational configurations were believed to offer the best opportunity to achieve the goals of the Bureau. I want an organizational structure which will enhance the operational effectiveness of OSM in the years ahead with an emphasis on accountability, responsibility, and stability.

The organization I have proposed would improve OSM's operations specifically by increasing service to our clients, reducing management layers, clarifying lines of authority, and emphasizing the functions of our 13 Field Offices in mission accomplishment.

To effect these improvements several changes are needed in the current alignment. A comprehensive description of my organization plan was provided to the Committee on April 19 by Assistant Secretary Lou Gallegos in seeking your approval under reprogramming guidelines. Highlights of the proposal include:

- OSM's 13 Field Offices will be responsible to a newly established Assistant Director for Field Operations in Washington, D.C.

  Currently they report along geographic lines to field-based Assistant Directors in Pittsburgh, PA, and Denver, CO.

- Field Operations units in Pittsburgh and Denver will be redesignated as Field Support Centers providing both technical and administrative assistance.

- At OSM headquarters, the Budget Office will be made a component of the Director's Office to assure that the budget is formulated to address the agency's priorities for resources to accomplish our mission. The Assistant Directorate for Budget and Administration and the Assistant Directorate for Information Systems Management will be combined to create an Assistant Directorate for Administrative Services. By merging both headquarters Assistant Directorates responsible for administrative support to mission activities, administrative services will be directed and organized through a single chain.

Question: Was your reorganization plan reviewed and approved by the Secretary before it was sent to the Committee?

Answer: The reorganization plan was reviewed by the Assistant Secretary for Policy, Management and Budget and appropriate Departmental staff before submission to the Committee. The Secretary has not yet approved the plan.

Question: You have stated that a key component of your reorganization plan is the decentralization of decision-making in the field. How is that accomplished when, under your plan, all State directors will now report directly to Mr. Tipton in Washington?

Answer: State Directors will not report directly to Mr. Tipton, Deputy Director for Operations and Technical Services, but to an Assistant Director for Field Operations. This will eliminate one management layer for field operations and avoid funneling of control through regional centers in Pittsburgh and Denver. Attention to problems will be quicker and more responsive through reporting to a single point of contact.

Clear accountability for field responsibilities and attendant operational decisions would rest with the Field Office Directors. With direction given by a senior manager in Washington, the major program activities which are inherently field based would be implemented by Field Offices without intervening interpretation.

QUESTIONS SUBMITTED BY SENATOR FRANK LAUTENBERG

Abandoned Mines Below New Jersey Municipalities

Question: The State of New Jersey is riddled with abandoned iron and copper mines. It is my understanding that there are around 400 iron ore mines in northern New Jersey. Does the Department monitor or maintain a record of currently abandoned iron and copper mines?

Answer: No, the Office of Surface Mining does not monitor or maintain a record of abandoned iron and copper mines in New Jersey or elsewhere. Under the Surface Mining Act, OSM is authorized to regulate and reclaim coal mines (and within limits non-coal mines) in coal producing States.

Question: If so, please describe the nature of the abandoned copper and iron mines in New Jersey.

Answer: As stated above, OSM does not, and is not authorized to, monitor or maintain a record of abandoned iron and copper mines in New Jersey.

Question: Please provide your assessment of the threat they pose to public safety and private property and the steps necessary to address that threat.

Answer: Because OSM does not, and is not authorized to, monitor or maintain a record of abandoned iron and copper mines in New Jersey, the Office cannot provide any such assessment.

Question: In North Arlington and Mine Hill, New Jersey, there have been cave-ins of abandoned mines, causing significant damage to properties situated above them. Is the Department aware of similar cases in New Jersey?

Answer: OSM is not aware of cases in New Jersey similar to those in North Arlington and Mine Hill.

Question: What role can the Department play in addressing the problems in these communities?

Answer: OSM is aware of the situations in both North Arlington and Mine Hill and has provided limited assistance, mostly in the form of consultation to public officials. OSM lacks authority to reclaim abandoned mine lands in non-coal States; we cannot address the problem of abandoned iron and copper mines in New Jersey.

Question: Please provide the Department's assessment of the North Arlington and Mine Hill situations.

Answer: Both situations involve poorly understood mining conditions, lack of information on underground conditions, as well as lack of available funds for reclamation.

Question: What specific action has the Department taken to help remediate the problems in North Arlington?

Answer: OSM is not aware of any actions being taken by the Department to remediate the problems in North Arlington.

Question: In Mine Hill?

Answer: I understand from the U.S. Bureau of Mines that Congress appropriated $150,000 to the Bureau in FY 1989 for a study of the problem in Mine Hill with the understanding that local, county, or State funds would be provided to match the Federal share. To date, no funds have been expended. The Bureau of Mines is in the final stages of entering into a Memorandum of Agreement with Mine Hill. Once this Agreement is signed, expenditure of the funds will begin. The first year of the agreement will cover the development of detailed maps of the township delineating surface culture, mine workings (to the limits of the available mine maps), and prior and existing subsidence events. The cost of this first year's effort will be $100,000, of which $50,000 will be the Federal share and $50,000 will be the Mine Hill share. Once the maps of the area have been developed, then the magnitude of the problem can be better assessed and a remediation plan developed.

Question: Has the Department identified any other areas in New Jersey where similar situations could arise?

Answer: OSM has not identified potential subsidence areas in New Jersey or developed a plan for attacking the subsidence problem in New Jersey on a State-wide level. It has no authority to do so in non-coal States under the Surface Mining Act.

Question: Has the Department developed a plan for monitoring abandoned mines in New Jersey?

Answer: OSM does not have any authority under the Surface Mining Act to monitor abandoned mines in New Jersey.

Question: Has the Department developed a plan for addressing this problem on a statewide level?

Answer: OSM does not have any authority under the Surface Mining Act to address the problem of abandoned mines in New Jersey.

Question: Can you provide a summary of the Department's actions to remediate collapsed iron and copper mines in other states?

Answer: OSM has authorized limited expenditures of abandoned mine land funds for non-coal abandoned mine problems in coal mining States. Reclamation work has been authorized for copper and iron mines in Alabama, Colorado, Montana, and Wyoming. A total of 43 projects have been completed at a cost of $4,850,000. Remedial action consisted of filling abandoned shafts and drift openings, filling cropfall subsidence pits, and eliminating dangerous facilities.

Question: Can you provide a summary of the Department's actions to remediate collapsed coal mines in other states?

Answer: OSM administers a trust fund established to address and remedy problems created by pre-Act coal mining (prior to enactment of the Surface Mining Control and Reclamation Act of 1977) including collapsed abandoned coal mines. The principal means for reclaiming abandoned coal mines are grants to coal mining States. The trust fund is financed by an assessment on each ton of current coal production and distributed to the States on the basis of their current and historical coal production. In 1990, $150,000,000 was allocated by Congress from the trust fund for State reclamation program grants.

Each State develops a priority listing of abandoned coal mine sites requiring reclamation. Subsidence problems are prevalent in areas of prior underground coal mining. Technologies such as hydraulic backfilling, grouting, pneumatic stowing or overexcavation are utilized to stabilize these undermined areas. Mine openings are generally sealed or backfilled to minimize the inherent dangers.

During the period 1979--1988, the grants program provided funding of $330,805,132 for reclamation of problems due to abandoned underground coal mines. An estimated $1,895,000,000 inventory remains to be funded.

Question: Last year, Congress appropriated $150,000 for a study of the situation in Mine Hill. Has any of that money been spent?

Answer: I understand from the U.S. Bureau of Mines that Congress appropriated $150,000 to the Bureau in FY 1989 for a study of Mine Hill with the understanding that local, county, or State funds would be provided to match the Federal share. To date, no funds have been expended.

Question: If so, how and by whom?

Answer: I understand from the Bureau of Mines that no funds have been expended.

Question: If not, why not?

Answer: I understand from the Bureau of Mines that the Bureau is in the final stages of entering into a Memorandum of Agreement with Mine Hill. Once this Agreement is signed, expenditure of the funds will begin. The first year of the agreement will cover the development of detailed maps of the township delineating surface culture, mine workings (to the limits of the available mine maps), and prior and existing subsidence events. The cost of this first year's effort will be $100,000, of which $50,000 will be the Federal share and $50,000 will be the Mine Hill share. Once the maps of the area have been developed, then the magnitude of the problem can be better assessed and a remediation plan developed.

QUESTIONS SUBMITTED BY SENATOR DALE BUMPERS

Question: I understand that the Department has decided not to appeal the recent federal District Court decision, National Wildlife Federation et al. v. Lujan, Civ. Action No. 87-1051 et al., (D.D.C., February 12, 1990), striking down several regulations relating to subsidence as violative of the Surface Mining Control and Reclamation Act of 1977. What actions does OSM plan to take in response to this decision?

Answer: The Department of the Interior is examining the court's order to determine what will be necessary in terms of a suspension and/or proposed revisions to the remanded regulations to comply with the order. We expect to have a decision on this matter very soon and will then take the necessary regulatory action. We will keep you informed.

Question: When will OSM suspend the regulations struck down by the court?

Answer: We are in the process of determining whether it is necessary to suspend the remanded provisions in order to implement the court's order. We will keep you informed.

Question: When is OSM planning to issue new regulations on subsidence?

Answer: Although OSM plans to move as expeditiously as possible, the completion of any final regulations, including rule proposal and consideration of public comments, would likely occur sometime in 1991.

Question: I am disappointed that this Administration is continuing the pattern of previous years by requesting to phase out the Rural Abandoned Mine Program (RAMP) although it is a very effective program. Would $2.1 million be enough to complete existing projects?

Answer: Yes, $2.1 million would be enough to complete all existing projects.

Question: Do any States currently support their own reclamation projects?

Answer: All program States currently support their own reclamation projects including those in rural areas.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

General Budget

The Office of Surface Mining's total FY 1991 budget request is $260,741,000. This is a $34,759,000 (12%) reduction from the FY 1990 enacted appropriation of $295,500.000. Provided that your request will adequately meet your needs in FY 1991, I commend you for this reduction.

Your requested reduction of $34,759,000 is a net result of a proposed increase of $8,117,000 for your Regulation and Technology Appropriation and a proposed decrease of $42,876,000 in your Abandoned Mine Reclamation Fund Appropriation.

Of the requested increase of $8,117,000 under Regulation and Technology, $6,000,000 is for State regulatory program grants. On page 3 of your FY 1991 budget justification, you indicate that this increase is necessary to maintain "solid and capable State programs."

Question: Please elaborate on how an additional $6,000,000 will benefit the State programs.

Answer: The FY 1990 level provided $41.9 million to support the regulatory programs in 24 States. This level, which has not increased since FY 1986, makes it increasingly difficult for States to enhance or maintain certain aspects of their regulatory programs, such as inspection frequency, and precludes or delays many desired initiatives, such as submitting necessary State program amendments to remain consistent with Federal provisions and performing thorough checks of permit applicants.

The proposed increase will provide funds to State regulatory authorities to continue to implement their programs effectively by allowing for necessary increases in salaries, supplies, vehicles and associated costs due to inflation.

The $6.0 million increase will provide adequate funding to ensure strong, well-managed regulatory programs and is vital to continue OSM's commitment to the principle of State primacy.

Question: On page 21 of your FY 1991 budget justification, you indicate that in accordance with the Surface Mining Act the federal share of your State Regulatory Program Grants activity has dropped from 80 percent in the first year to 60 percent in the second year and now is at 50 percent (where it will stay). Why, if the federal share has been dropping, is your request increasing by $6 million in FY 1991?

Answer: Section 705(a) of the Surface Mining Control and Reclamation Act states:

"The Secretary is authorized to make annual grants to any State for the purpose of assisting such State in developing, administering, and enforcing State programs under this Act. Except as provided in subsection (c) of this section, such grants shall not exceed 80 per cent of the total costs incurred during the first year, 60 per cent of total costs incurred during the second year, and 50 per centum of the total costs incurred during each year thereafter."

States began providing matching funds for the regulatory grants as early as 1978. All States have been providing 50 per cent of the total costs incurred on non-Federal lands since 1986. With States successfully matching Federal funds at the 50% level, OSM is getting more product for each Federal dollar than when the higher Federal matching percentages were in place. However, there has not been an increase in the Federal share since 1986. This makes it increasingly difficult for States to enhance or maintain certain aspects of their regulatory programs, such as inspection frequency, and precludes or delays many desired initiatives, such as submitting necessary State program amendments to remain consistent with Federal provisions and performing thorough checks of permit applicants.

Abandoned Mine Reclamation Fund

Of the requested decrease of $42,876,000 under your Abandoned Mine Reclamation Fund Appropriation, $33,000,000 of the reduction is from State Reclamation Program Grants. As in prior years, the grants request is based on a review of the total amount of funds currently available to the States as well as the States' ability to obligate. At the start of FY 1990, over $439 million was available to the States for reclamation projects. This amount is 2.7 times more than the total amount obligated during FY 1989 (p. 5).

Question: In recent years, have the States increased their abilities to obligate these funds?

Answer: Although some individual States have increased their annual obligations, as a whole, the States have not increased their ability to obligate funds. Total State obligations per year have remained relatively constant for the past three fiscal years.

FY 1987: $176.8 million
FY 1988: $173.1 million
FY 1989: $170.2 million*

*This amount differs from the $160.8 million found in the budget justification. It includes a Kentucky project not included in the initial computer totals of projects.

Question: Is there anything more that Congress or the Administration can do to increase the efficiency of this program?

Answer: The efficiency of the program, measured in terms of funds obligated, can be increased by appropriating funds at a level that results in minimal carryover of unobligated funds. The requested appropriation level provides the States with sufficient resources to continue ongoing reclamation projects, plan for future projects, and administer the program. The reduced appropriation also serves as an incentive to obligate currently available funds so that larger appropriations might be justified in future years.

Question: Will this reduction harm the mandate of this program?

Answer: No. It will help it. Increasing the grant level would only further increase the build-up of unused funds.

Question: On page 5 of your FY 1991 budget justification, you indicate that there was over $439 million available to the States from the Abandoned Mine Reclamation Fund at the beginning of FY 1990. On page 105, however, the cumulative unappropriated fund balance in the Fund in FY 1990 is listed as $533.7 million. How do you account for this discrepancy?

Answer: The citation of $439 million in available funds is a reference to the total amount available to the States for reclamation projects as follows:

FUNDS AVAILABLE TO STATES, BEGINNING OF FY 1990

AMOUNT	SOURCE
$150 million	FY 1990 appropriation
257 million	Unobligated balance at end of FY 1989
32 million	Appropriated, unawarded funds at end of FY 1989
$439 million	Total available to States at beginning of FY 1990

The citation of $533.7 million is a reference to the unappropriated balance of the Abandoned Mine Reclamation Fund.

Adjustments to Base

On page 18 of your FY 1991 budget justification, you are requesting $600,000 increase in your Regulation and Technology base for "Adjustment for Current Operations." You are also requesting an identical amount in your Abandoned Mine Reclamation Fund appropriation (p.90). The justification further explains the following:

> "Preliminary information indicates that bureau operating costs for current on-board staff may be exceeding available resources. The bureau has requested an Inspector General review of the matter while the bureau continues it own

review of this potential 1990 funding shortfall. This base adjustment would avoid extending the potential 1990 shortfall into 1991."

Question: Is the Inspector General review referred to in this passage the same one which was issued last month - Report No. 90-68, Budget Execution Office of Surface Mining Reclamation and Enforcement?

Answer: Yes, the Inspector General's Report No. 90-68 is the one referred to in the budget justification.

Question: If so, why does the Inspector General's report indicate that your FY 1990 shortfall will be approximately $4.2 million, instead of the $1,200,000 estimate in you budget justification?

Answer: The difference in the estimates of shortfalls is based on several things. The Inspector General's review was based on a worst case scenario. The review anticipated no change in total employment in OSM and a low level of recoveries for FY 1990. OSM has taken steps to reduce this shortfall by instituting a hiring freeze and a project to deobligate and recover all inactive contracts and purchase orders. This has allowed OSM to reduce the estimated shortfall.

The adjustment for current operations will increase the amount available in the budget for salary, benefits and related personnel costs. After grants, the largest portion of OSM's budget is in personnel operating costs. After several years of absorbing pay raises, it is no longer possible for OSM to continue to absorb pay raises without an increased appropriation. Without this base adjustment, the options are a large reduction in staffing or large reductions in programs. The increase of $1.2 million will allow OSM to use this funding for personnel and other base funding for programs.

OSM Reorganization

Question: In your opening statement, you say that one of your goals related to the proposed reorganization is an improvement in decision making within OSM. How is this reorganization different from previous ones?

Answer: This reorganization involved all segments of the existing organization through a task force of OSM employees. Previous structures were examined by the group with an analysis of their strong points and their weaknesses. The strong points were incorporated to the extent impacts on employees could be minimized and costs were reasonable.

Question: OSM has reorganized several times in the past. Now you are planning another reorganization. Isn't this disruptive to your employees?

Answer: Impact on employees was a major consideration in development of the proposal. Our emphasis is on voluntary shifts within the agency. Many employees are anxiously anticipating new challenges in other areas of OSM and wish to broaden their experiences. To the extent possible, employee needs will be accommodated.

Question: How will this reorganization correct the problems that were created by the previous ones?

Answer: Previous reorganizations were attempted without the extensive employee participation that has been a key aspect of this proposal. We expect to have maximum employee support for this configuration with all employees placed. The removal of extensive layering of management will make OSM more responsive, efficient, and cost effective. Above all, we will enhance our credibility in the eyes of Congress and the public.

Question: How will the reorganization affect the oversight responsibilities of OSM?

Answer: Benefits would accrue through consistent practices regarding oversight activities nationwide as well as consistent approaches to inspection and enforcement responsibilities. Additionally, the reporting and analysis of data will achieve greater consistency. The methodology, approach, and reporting of these activities to Congress and other interested parties can be expected to be more credible, timely, and consistent. Focus of these activities and reporting responsibilities with a single manager in Washington rather than with two geographically distinct managers would facilitate accomplishment of these goals.

Inspector General Report

The results of the Inspector General's audit indicated that Surface Mining's procedures for charging appropriations were not adequate to ensure that funds were spent in accordance with the intent of the FY 1990 appropriations. Procedural weaknesses occurred because personnel were not required to prepare detailed reports which reflected the actual time expended on the Regulatory Programs or Reclamation Programs, and because budgeted requirements were not adjusted to funding levels.

Question: Please provide the Subcommittee with a detailed response indicating how you will rectify these problems.

Answer: The Inspector General's recommendations are quoted below, and each is followed by our response.

1. Ensure that plans to cover the shortfall are accomplished in an expeditious manner, including reducing requirements for both the Regulatory Programs and the Reclamation Programs and, if necessary, initiating reprogramming actions and requesting supplemental appropriations for the Programs.

Response: The shortfall is being covered by reduced spending, reduced salary costs through a hiring freeze, and recovery of prior "no-year" funds and current year funds where possible. The Department will submit a reprogramming letter to the Appropriations Subcommittees based on the results of OSM's mid-year review. Careful monitoring of expenditures will be exercised for the balance of the fiscal year.

2. Establish a formal process to verify direct time charged to the two appropriations, such as requiring personnel to prepare time and activity reports. The practice of charging one appropriation for work related to the other appropriation should be discontinued immediately.

Response: OSM will do a test run during the summer utilizing a format similar to that used in the Wilkes-Barre Area Office (and cited in the audit) for employees who work under both appropriations to record actual time under each. The test run will provide information on the adequacy of format for consideration.

3. Charge administration or support costs directly to the appropriate Reclamation or Regulatory appropriation account based on actual work performed. In those instances where it is impractical on a direct charge basis, percentage allocations should be updated and documented based on a method that is supported by actual work performed in each office.

Response: A one month study of administrative/support operations will be conducted to determine -- as nearly as possible -- percentages of time utilized under both allocations. Study methodology will have to be developed, but could include the logging of staff time and adapting similar percents to non-salary costs in combination with actual known costs attributable to a given fund. OSM will implement the results of the study as appropriate.

4. Reduce operational resources to authorized levels.

Response: OSM is reducing FTEs through attrition and expects to meet its authorized target by the end of this fiscal year.

Question: Will your actions to correct this situation comply fully with the Inspector General's recommendations?

Answer: Yes, OSM believes these actions will answer the Inspector General's recommendations.

State Bond Program

In recent years, a number of surety companies and banks guaranteeing the reclamation of surface coal mining operations were declared insolvent or went into bankruptcy (p.31). Some of the insolvencies were caused by mine operator forfeitures. Small coal operators are increasingly being required to post large amounts of collateral, resulting in cash flow problems. Some large operators are finding surety bonds more difficult to obtain.

Question: Does this continue to be a problem at this point in time?

Answer: Although in 1985-86 a number of surety and bank insolvencies occurred causing some mine operators difficulty in obtaining bonds, there have been very few insolvencies since that time. Surety bonds continue to be the primary instrument used by operators as reclamation guarantees, and OSM established a tracking and reporting system for notifying Regulatory Authorities of insolvencies and potential bankruptcies as soon as we become aware of them. In this way, the impact of insolvencies on reclamation activities is reduced by having bonds replaced as quickly as possible.

Question: What action is OSM taking to rectify this situation?

Answer: OSM has reinstated bonding regulations to allow both incremental and phase bonding of sites and promulgated new regulations that allow third party bonding without the use of a surety. Each of these changes was aimed at minimizing the impact of SMCRA on bond availability while remaining consistent with congressional intent. Beyond these measures however, OSM is limited in its ability to influence the private market transactions of the surety industry. Even so, OSM continues to seek opportunities which may help address the bond availability problem.

OSM is presently addressing bonding issues through work group initiatives on alternative bonding systems, determination of regional reclamation costs, and most importantly, creation of a national bond pool.

Question: Have you requested funds for FY 1991 which will address the bonding issue?

Answer: Although we have not requested additional funds in FY 1991 to address this issue, further investigations in the bonding area may be initiated by OSM through our research program. However, research priorities for FY 1991 have not yet been developed.

Question: A portion of OSM's FY 1989 research budget targeted projects intended to address the bonding issue. What were the results of these projects?

Answer: In FY 1989, OSM funded a research project through Purdue University to evaluate and quantify the risks of reclamation bonding. This effort is scheduled for completion in 1991 and will lead to a better understanding of risks to surety companies when underwriting reclamation bonds.

Emergency Reclamation Projects

In FY 1989, OSM requested $9 million for emergency reclamation projects, but ended up running out of money. It looks like you are running out of money again in FY 1990. Your FY 1991 request is the same -- $9 million (p. 109).

Question: What are the main factors that cause these emergency situations to occur?

Answer: Abandoned mine land sites are extremely susceptible to climatic changes. The number, type and severity of emergency referrals typically fluctuate seasonally. During FY 1988, the eastern United States experienced drought conditions and the emergency program received 42 referrals involving mine or refuse fires, 101 subsidences, and 9 landslides.

In FY 1989, prolonged periods of precipitation occurred in central Appalachia during January through June. This resulted in 10 referrals involving mine or refuse fires, 99 subsidences and 55 landslides.

The unusually wet and warm winter in Appalachia this year has resulted in 225 referrals through May 31, 1990, including refuse and mine fires, subsidences, and landslides.

The other major factor causing these emergencies lies in the topography of the Appalachian region. Steeply sloping terrain in Appalachia is marginally stable in its natural state. When outslopes are loaded by spoil from pre-Act surface mining, water soaking into the soil and spoil "lubricates" it and creates a failure plane. Landslides occur and, if homes are involved, the landslides threaten and endanger inhabitants.

Question: Why don't you base the FY 1991 request on last year's needs?

Answer: At the time of the development of the FY 1991 budget request, we did not know the level of the FY 1990 emergency program. Emergencies are, by their very nature, unpredictable. When OSM developed the preliminary budget request, it was based on the historical average from 1984 to 1989, adjusted to remove the high and low years. This average was $14.6 million.

Question: Isn't there any way to gauge your emergency reclamation needs for each upcoming year?

Answer: Historical emergency reclamation needs for those eastern States where OSM has responsibility provides the best estimate of future requirement. For the six-year period from 1984 through 1989 inclusive, gross obligations have ranged from a high of $25.7 million (1985) to a low of $8.9 million (1987).

Question: How do you know you won't have the same shortage of funds again in FY 1991?

Answer: We cannot be certain that there won't be a shortage in FY 1991. Annual gross obligations for emergency projects in those eastern States where the Agency has current responsibility have varied from a high of $25.7 million (FY 1985) to a low of $8.9 million (FY 1987). The wide range reflects the unpredictability of emergency events.

Question: Is there any other source of funds in the same budget activity that would be available to use for emergencies?

Answer: OSM has used recoveries from prior projects for the emergency program as they have become available. OSM has also deobligated and recovered all inactive contracts and purchase orders in this budget activity and used them for emergencies. Finally, OSM used $1.25 million of FY 1990 high priority project money to fund emergency projects. There are no other sources of funds available in this activity.

Question: Have you used them?

Answer: Every source of funds available in this budget activity, as described above, has been used by OSM to fund current emergencies.

Kentucky Settlement Agreement

The Kentucky Settlement Agreement was established in FY 1988 in response to settlement of a civil action filed against the Commonwealth of Kentucky by the National Wildlife Federation. Although OSM was not a party to the civil action, the settlement agreement required OSM and Kentucky to work together to resolve issues stemming from the civil action. Fiscal Year 1991 marks the fourth and final year of the plan. The agreement is scheduled to expire in mid-Fiscal Year 1991 (p. 42).

The agreement also provides a framework for the State to ultimately carry out its own responsibilities once it expires. On page 45 of your FY 1991 budget justification, you indicate that Kentucky's staffing profile as of September 30, 1989, was 437 FTEs under the State's Administration and Enforcement Grant and 78 under the State cooperative agreement.

Question: In light of the fact that your FY 1990 budget justification indicated that Kentucky's staffing profile at the end of FY 1988 was nearly identical (423 and 82 FTEs, respectively) do you believe that the State will be in a position to take over this program in the next few months?

Answer: Yes. Kentucky's General Assembly recently enacted a biennium budget which provides the Kentucky Natural Resources and Environmental Protection Cabinet with adequate funding to retain 80 of the 102 positions currently funded by the Cooperative Agreement after February 1, 1991. Fifty percent matching funding for these 80 positions, and an additional 10 positions not related to the Cooperative Agreement, will be included in Kentucky's FY 91 Administration and Enforcement grant application, and will be continued in succeeding years.

The additional funding provided by the legislature assures the maintenance and continuation of the programmatic gains achieved under the Cooperative Agreement after the agreement expiration on January 31, 1991. Continuation of the personnel and contractual costs from the Cooperative Agreement for eight months of operation during FY 91 will require matching funds of $873,850. The annualized cost of maintaining the Cooperative Agreement personnel and programs will exceed $1.2

million in matching funds. This money will ensure that Kentucky continues to properly implement the Surface Mining Act.

Two-Acre Sites

OSM has been conducting extensive oversight activities to ensure that regulatory compliance and enforcement action is initiated when violations of the regulatory requirements are identified in two-acre sites in Virginia and Kentucky. While OSM has responsibility for inspection and enforcement activities, the State will continue to follow through on enforcement actions of any previously cited violations. Recent legislation that deleted the two-acre exemption from the Surface Mining Act will ultimately eliminate the need for the two-acre inspection program (p. 38).

Question: When will the need for the two-acre exemption be eliminated?

Answer: KENTUCKY. A total of 1,935 sites remain on the two-acre inventory in Kentucky. Based upon currently available inspection resources, an additional 4.7 years will be required to complete the two-acre effort. Completion of enforcement follow-up inspections will require one to two additional years, but with a substantially reduced staff.

VIRGINIA. OSM has essentially completed the two-acre effort in Virginia. Remaining workload is to conduct Federal enforcement inspections to evaluate vegetation success and to approve/verify sediment pond removal and will require approximately two years to complete.

Negotiations with Save Our Cumberland Mountains (the plaintiffs) to amend the two-acre settlement agreement has resulted in a phase-out and termination plan which is currently under consideration.

Technical Information Processing System (TIPS)

In FY 1989, extensive progress was made in full implementation of the Technical Information Processing System (TIPS). TIPS is an ADP system that provides a comprehensive set of automated, technical and analytical tools to assist States' reviews of mining permits, reclamation plans, environmental assessments and to assist States in the conduct of other scientific and technical evaluations necessary for administration of the Surface Mining Act (p.48).

On page 49 of the FY 1991 budget justification, you say that one of the most important tasks to be completed in FY 1990 is the continued in-depth training provided by OSM technical staff to the TIPS users on the use of the Geologic Surface Modeling and Geographic Information System.

Question: How is this important training proceeding?

Answer: These programs are the most extensively used software on the TIPS minicomputer. They use state-of-the-art evaluations of permit applications and in the design of AML projects.

One 5-day training session is scheduled for the week of August 20, 1990, at the USGS facility in Denver.

Question: How many employees are involved in this training operation?

Answer: The August 20, 1990, training session will be for 32 participants, with five OSM instructors and three contractor instructors from the software vendor.

Question: Will the training continue in FY 1991 and beyond?

Answer: An additional training class is scheduled for early FY 1991. OSM plans to conduct ongoing training for the States in the use of all the TIPS software during FY 91 and beyond. New State employees and other TIPS users need ongoing training to be able to use the full capabilities of TIPS.

Unpaid Debts

For the past few years the debt owed to the OSM from unpaid fees has come under considerable scrutiny (p. 103). According to your budget justification, OSM has continued to refine and improve the debt collection process. For example, in FY 1989, AML debt was reduced from $50 million to $48 million. Of the $50 million in FY 1989, it is my understanding that $48.2 million was more than 90 days past due.

Question: Is a $2 million improvement really all that significant?

Answer: On October 1, 1987, there were 10,187 AML cases past due worth $50.34 million. In the two and one-half years that followed (through March 31, 1990), OSM received 11,221 new cases worth $15.53 million and processed 13,982 cases worth $18.96 million, including collections of $9.38 million. In addition OSM has $0.67 million in current payment agreements with debtors, for a total collection value of over $10 million. Thus, OSM is keeping up with its new debt and is making some progress in processing the older cases.

OSM is precluded from further processing of bankrupt cases ($16.55 million) until the court resolves these cases. The Solicitor's office manages these cases, files necessary court documents, and protects OSM's interest during the distribution of the bankruptcy estate.

Much of the debt in the Solicitor's office is very old, and OSM is working closely with the Solicitor to write-off debt which we have no chance of collecting.

Of the debt which is past due as of March 31, 1990 ($46.91 million), we estimate that 80% ($37.44 million) will eventually prove uncollectible. We have recognized this uncollectible estimate in our 2nd quarter FY 1990 (Schedule 9) report to the Department of Treasury; however, all AML debt which is past due is retained in OSM's Applicant Violator System. Before violators are cleared to receive new mining permits they must pay their past due debts, including interest, late payment penalties and administrative charges.

The status of AML debt processing as of March 31, 1990, follows:

Bankrupt (with Solicitor)	1,740 cases	$16.55 million
With Solicitor (for litigation)	3,821 cases	25.66 million
Subtotal with Solicitor	5,561 cases	$42.21 million
With Collection Contractor	477 cases	$2.48 million
In Payment Plan	79 cases	.67 million
Small Dollar Cases (under $200)	983 cases	.06 million
In-process (OSM)	237 cases	.81 million
Non Delinquent	89 cases	.68 million
Subtotal with OSM	1,865 cases	$4.70 million
Subtotal with Solicitor	5,561 cases	$42.21 million
Subtotal with OSM	1,865 cases	$4.70 million
Total AML Receivables	7,426 cases	$46.91 million

As this table shows, a small percentage of total receivables is being processed by OSM.

Question: Of the current debt, how much is more than 90 days past due?

Answer: At the end of March 1990, 7,112 cases worth $45.53 million were over 90 days past due.

Question: How much is more than a year past due?

Answer: At the end of March 1990, 6,143 cases worth $42.37 million were over 1 year past due.

SUBCOMMITTEE RECESS

Senator Reid. I thank you very much. The subcommittee will stand in recess until 2:30 p.m., Wednesday, June 6, when we will hear testimony from the National Endowment for the Humanities.

[Whereupon, at 11:12 a.m., Friday, May 18, the subcommittee was recessed, to reconvene at 2:30 p.m., Wednesday, June 6.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

WEDNESDAY, JUNE 6, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:38 p.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, Bumpers, McClure, Stevens, Cochran, Nickles, and Hatfield.

NATIONAL ENDOWMENT FOR THE HUMANITIES

STATEMENT OF LYNNE V. CHENEY, CHAIRPERSON

ACCOMPANIED BY:

- CELESTE COLGAN, DEPUTY CHAIRMAN FOR PROGRAMS/ADMINISTRATION
- STEPHEN CHERRINGTON, DIRECTOR, OFFICE OF PLANNING AND BUDGET

OPENING REMARKS

Chairman BYRD. The subcommittee will come to order. This afternoon, the subcommittee will be hearing witnesses with respect to the budget request for the National Endowment for the Humanities, and the National Endowment for the Arts.

First to make a presentation before the subcommittee will be Mrs. Lynne V. Cheney, Chairman of the National Endowment for the Humanities. She will be followed by Mr. John Frohnmayer, Chairman for the National Endowment for the Arts.

Senator Hatfield, the ranking member on the full committee, is an ex officio member of the subcommittee, and he wishes at some point to speak with respect to Mr. Frohnmayer, who is, I believe, from the State of Oregon.

So, because we will be talking with Mrs. Cheney for quite a while, and in order to accommodate Senator Hatfield so that he will not have to remain here throughout all of that time, as he has other matters scheduled, I would like at this time, with the indulgence of my counterpart of this subcommittee, Senator McClure, to call on Senator Hatfield for any comments that he may wish to make which will appear in the record at that point when Mr. Frohnmayer presents his budget to the subcommittee.

Senator **McClure**. Mr. Chairman, you have my permission to do so.

Chairman **Byrd**. With concurrence and with pleasure. That being the case then, Senator Hatfield, why don't you proceed with your remarks then and they will be placed in the appropriate place in the record.

Senator **Hatfield**. Thank you, Mr. Chairman.

Chairman **Byrd**. Well, I thank you, Senator Hatfield. That Hatfield hug is a great one, truly a great one. Senator Hatfield, as the ranking member of the full committee, and as the former chairman of the full committee, has certainly given me great encouragement when I have needed it, also; and I am grateful for it.

And he has given me his wisdom and his guidance, and he has also shared these with a good number of Members on either side of the aisle, many for whom I have a great respect, and a good many for whom I do not have as much respect. So, thank you, Senator Hatfield.

Senator **Hatfield**. I appreciate it. Thank you.

PREPARED STATEMENT

Chairman **Byrd**. So, Mrs. Cheney, welcome before the committee. Your complete statement will be included in the record at this point, and so if you wish to introduce your associates to the subcommittee, and then read your statement in full, or summarize it as you wish, you may do so. Please proceed.

[The statement follows:]

STATEMENT OF LYNNE V. CHENEY

Mr. Chairman and Members of the Subcommittee:

It is a pleasure to appear before this Subcommittee once again to testify on behalf of the appropriations request for fiscal year 1991 for the National Endowment for the Humanities and to discuss with you the programs and activities of the Endowment. I want you to know that we at the Endowment greatly appreciate the support and encouragement this Subcommittee has given us over the years in our efforts to advance scholarship, education, preservation, and public understanding of the humanities throughout the United States.

We are proud that the Endowment was singled out in the President's preface to the FY 1991 budget narrative for the work we do to help keep alive Americans' awareness of their historical and cultural heritage. We are grateful indeed that the Administration chose to acknowledge our efforts and to request, in this time of fiscal constraints, a healthy and significant increase in our funding.

The FY 1991 request for NEH represents an increase over both our FY 1990 request and the appropriations provided by Congress for FY 1990. It exceeds current funding by $8.1 million, or 5.2 percent. This increase in federal support for the humanities in FY 1991 is needed to allow the Endowment to implement a number of new program emphases, to sustain emphases already in place, and to maintain viable levels of support in other program areas. The FY 1991 request features a $2.5-million special opportunity in foreign language education, a significant increase in funding for the Division of Research Programs, and enhancement of support for efforts to preserve deteriorating books, documents, material culture collections, and other research materials, and new efforts to expand general audience programming in the humanities.

By making grants for significant projects in the humanities, the Endowment acts as a catalyst to preserve and pass on the knowledge of our own and other cultures. In FY 1989, for example, we made almost 2,300 awards to individuals and institutions in every state plus the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. These projects helped to improve the quality of humanities education in our schools and colleges; preserved the content of endangered humanities books and documents; added to our knowledge of important historical and literary texts, themes, and events; and fostered better public understanding of the humanities. Let me give you just a few illustrations of the many significant projects that received funding from NEH during the past year:

-- The American Library Association received a grant from the Endowment in FY 1989 to support a major traveling exhibition about the history of the U.S. Congress. The ALA, in cooperation with the Library of Congress, developed a series of prints, photographs, documents, and other materials that depict the history of Congress's first two centuries. The exhibition is traveling to public libraries in 30 cities across the nation including libraries in Charleston, West Virginia; Boise, Idaho; Oklahoma City, Oklahoma; Reno, Nevada; and Tucson, Arizona;

-- West Virginia University received $63,801 in FY 1989 to support a seminar for school teachers this coming summer on Absalom, Absalom!, one of William Faulkner's major novels. Led by project director Patr[illegible] O'Donnell of the University's English department, school teacher-participants from around the country will read and study this important work extensively in a collegial setting, an educational experience that should also inform their future classroom teaching;

-- In FY 1989, we also made an award of $19,235 to the West Virginia Women's Foundation in Charleston to support the planning of a series of traveling exhibitions and related public library programs on the history of women in West Virginia;

-- The Arizona Department of Education used $84,045 in FY 1989 funds from NEH to plan an American Indian Language and Culture Institute at Arizona State University for Arizona school teachers;

-- NEH awarded $125,756 in FY 1989 funds to the Department of Arkansas Heritage to develop an exhibition, catalogue, descriptive brochure, and video that explore the history and culture of the Arkansas Delta region;

-- Tougaloo College in Mississippi received $107,888 in FY 1989 through the Endowment's Access category in the Division of Research Programs to support the arrangement and description of documents that are central to the history of the civil rights movement in Mississippi held by the College's archives and to prepare a guide to the collection. This project will help make these important materials more accessible to humanities scholars;

-- As part of our national preservation effort, the State Historical Society of North Dakota in Bismarck received $25,000 in FY 1989 funds to continue the cataloguing of 1,800 newspaper titles held in North Dakota repositories and to preserve on microfilm the titles that are the most historically important;

-- The Idaho State Library in Boise received $73,210 to expand reading and discussion programs in the humanities for out-of-school audiences in public libraries, especially those in rural, isolated areas, throughout the state; and

-- The Sealaska Heritage Foundation in Juneau, Alaska used $56,023 in Endowment funds in FY 1989 to sustain its ongoing project of collecting, transcribing, translating, and annotating the oral traditions of the Tlingit, a major tribe of the Pacific Northwest.

In FY 1991, the Endowment will continue to support humanities projects of such substance and significance.

The narrative of the budget justification we submitted to Congress in January details our plans and priorities for FY 1991, but I would like to take a moment to mention briefly a few special highlights of our appropriations request. Humanities education again will be a particular focus of ours in FY 1991, as it has been in recent years. We believe that the quality of education available to students in schools and colleges is important to them as individuals and as citizens. It is particularly important to all society that the next generation learns about the basic principles of democracy, about our constitutional heritage, and about the rights and responsibilities of individuals in a self-governing polity.

Many studies and surveys over the last few years, some conducted by the Endowment itself, have painted a disappointing picture of the nation's educational achievements. A Gallup survey released by the Endowment in October of 1989 showed, for example, that 25 percent of our nation's college seniors could not distinguish Winston Churchill's words from Joseph Stalin's or Karl Marx's thoughts from those to be found in the U.S. Constitution.

In connection with this survey, NEH released a report, 50 Hours: A Core Curriculum for College Students, which calls attention to the need for rigorous and coherent programs of general education in our nation's colleges and universities. A core of learning not only provides students with opportunities to explore the major fields of human inquiry, we note in this report, it also encourages community. Having some learning in common draws students together--and faculty members as well. And, when that common learning engages students with their democratic heritage, it invites informed participation in our ongoing national conversation about the goals and values appropriate to a free people.

One of the recommendations made in 50 Hours is that distinguished faculty should teach general education courses. To encourage and reward such efforts, we recently initiated a special competition of Distinguished Teaching Professorship awards in our Challenge Grants program. These grants will be given in FY 1990 to higher education institutions that are committed to encouraging experienced, resourceful teaching in undergraduate humanities courses and to recognizing scholars who have distinguished themselves in the classroom. FY 1991 Challenge funds will help support the awards made under this initiative.

A particular emphasis for NEH in FY 1991 at all levels of education is improving the teaching and learning of foreign languages. The Endowment requests increased funding for the Division of Education Programs in FY 1991 to support a $2.5 million special effort to help schools and colleges strengthen foreign language teaching. We will, for example, invite colleges and universities to establish national and regional humanities institutes for elementary and secondary school teachers. These institutes will help teachers become more proficient speakers of the language they teach and better versed in the history and thought of the target culture. Encouraging teachers to use "authentic texts" in their courses will be an important component of the institutes' approach to teaching languages. We will also encourage colleges and universities to submit proposals to develop foreign language skills in courses in history, religious studies, politics, economics, and other humanities disciplines besides language and literature. In addition, institutions will be encouraged to improve their efforts to train future language teachers, especially at the elementary and secondary levels. Opportunities will also be available for schools and colleges to initiate special projects such as planning foreign language magnet schools.

In FY 1991, we will maintain other important education programming such as the NEH/Reader's Digest Teacher-Scholar program, which underwrites a year of independent study for an outstanding elementary or secondary school teacher from each state. The first awards in this well-received new program were made in FY 1989. In addition, in FY 1991 we will continue our support for the NEH History Center at the University of California, Los Angeles, which is studying and collecting information on how history is taught and learned in the nation's schools.

Our FY 1991 request also will allow the Endowment to address other pressing concerns in the humanities such as the work of scholars to recover, examine, and interpret the past. For FY 1991, we are requesting an increase of about $1.8 million in the allocation for the Division of Research Programs over the funds available for FY 1990. This enhanced funding will be used throughout the division but especially to provide additional support to major, multi-year projects in the Editions, Tools, and Access grant categories such as the authoritative editions of the papers and writings of George Washington, Frederick Douglass, Mark Twain, Jane Addams, and Martin Luther King, Jr., and the development of important research tools such as the Encyclopedia of Islam, a dictionary of the family of Sioux languages spoken by Native Americans in the Great Plains region, and a computerized bibliography of the holdings of the Schomburg Center for Research in Black Culture at the New York Public Library.

The FY 1991 budget request also will permit us to continue to implement our ambitious effort to preserve the knowledge and information contained in humanities research materials that are deteriorating from age, high-acid content, or improper storage and handling. In addition to the Endowment's support for projects to microfilm brittle books, the FY 1991 budget will allow us to support other essential activities that undergird the national preservation effort, such as the education and training of preservation administrators, and to continue our support for projects to preserve the content of other humanities research materials, such as deteriorating newspapers and other periodicals. Also to be continued in FY 1991 is the new National Heritage Preservation program, through which the Endowment is offering funds for museums, libraries, archives, universities, and other repositories of cultural artifacts to take steps necessary to protect their collections of material culture.

While we have been deeply concerned about the deterioration of humanities research materials and about the quality of teaching and learning of the humanities in our nation's schools and colleges, we are pleased to report that the humanities are flourishing in the public sphere. In museums, historical societies, and libraries and on radio and public television, public programming has grown to the point where it today constitutes a virtual "parallel school," as we pointed out in our 1988 report Humanities in America. The funding the Endowment has provided through our Division of General Programs and the fine work of the state humanities councils have both been crucial to this growth.

Central to these public programs are scholars who are dedicated to bringing what Matthew Arnold called "the best that has been thought and known" to their fellow citizens. To help recognize and publicize the good work of these scholars, in 1989 the Endowment established and made its initial awards in the Charles Frankel Prize competition. These annual awards will draw national attention to individuals whose efforts have deepened the general public's understanding of the humanities.

In FY 1991, the Endowment will remain committed to ensuring that Americans of all backgrounds and from all regions of the country have opportunities to learn about the humanities. In November 1986, the Endowment established a program entitled Access to Excellence to help individuals and groups that may not be familiar with our programs become more aware of them. Aimed at rural, inner-city, tribal and minority communities, this program promotes the Endowment's work nationally while also providing grant-writing assistance to first-time applicants on an individual basis. To date, the Access to Excellence program coordinator has traveled extensively (over 110 separate trips) in all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. He has held over a thousand meetings or workshops in elementary and secondary schools, two- and four-year colleges, public libraries, historical organizations, and other institutions. The coordinator also has attended numerous national, regional, state, and local conferences, sent out over 30,000 individual packets of materials explaining the grant opportunities of the Endowment, and provided hundreds of potential applicants with counsel over the phone or through the mail. In addition, the coordinator has consulted with many non-profit associations, Congressional staffs, state offices, and state humanities councils in building this extensive outreach effort.

Finally, in FY 1991 the Endowment will continue as always to encourage grantees to supplement federal funds with donations from third-party givers. Through our Challenge Grants program and our Treasury funds matching authority, we are able to match private donations to our grantees. Our matching awards not only stimulate giving, they have the added benefits of encouraging projects and institutions to build a wider base of support and interest in their communities and to bring their humanities activities to the attention of wider audiences. At our FY 1991 request levels for Challenge and Treasury, at least $57.45 million in contributions would be made to these deserving humanities projects.

Thank you for this opportunity to talk about the work and plans of the National Endowment for the Humanities. I would be happy now to respond to any questions you may have.

INTRODUCTION OF ASSOCIATES

Mrs. CHENEY. Thank you very much, Senator Byrd. I am accompanied here today by Celeste Colgan on my left, who is the Deputy Chairman of the Endowment, and on my right by Steve Cherrington, who heads our Office of Planning and Budget.

SUMMARY STATEMENT

It is indeed a pleasure to be here to testify on behalf of the Endowment's 1991 appropriations request. As you know, over these last few weeks, we have also been testifying before committees about our reauthorization.

And as I have been testifying before those committees, it is our goal, and indeed the goal of this administration, to reauthorize the National Endowment for the Humanities for 5 years.

I thought that would be a point of interest to this committee, but I think perhaps of more interest to all of us are some of the grants that we have funded over the last few years that show, I believe, the excellence which people across the country are capable of when encouraged by Federal funding.

One grant that I thought would be of particular interest to this committee is one that we made to the American Library Association in 1989 for a major traveling exhibition on the history of the U.S. Congress.

You may be familiar with this project, since it has appeared at the Library of Congress, and it is a series that has been done in connection with the Library. The exhibition is traveling to public libraries in over 30 cities right now, and it will help the American people as a whole understand better the distinguished history of this legislative body, a history, of course, which Senator Byrd is deeply versed in.

A project in West Virginia, Senator, that might be of interest to you, is a seminar for schoolteachers this coming summer on "Absalom, Absalom!," one of William Faulkner's major novels, led by project director Patrick O'Donnell of the West Virginia University's English department.

This particular seminar will gather schoolteachers from around the country and give them an opportunity to read and study this important work by William Faulkner extensively in a collegial setting.

Another project that we helped fund and that should be of interest to this committee was at the Idaho State Library in Boise, which was granted $73,210 to expand reading and discussion programs in the humanities for out-of-school audiences in public libraries, especially those in rural and isolated areas throughout the State.

The Sealaska Heritage Foundation in Juneau, AK, has been a recipient of Endowment funds recently, to sustain an ongoing project of collecting, transcribing, translating, and annotating the oral traditions of the Tlingit, a major tribe of the Pacific Northwest.

And I see that Senator Bumpers is with us as well, and it might be worth mentioning a grant from Arkansas, one that I have a particular fondness for. Well, there are two here really that are worth remarking upon; and that is one to the Arkansas Museum of Science and History for an exhibition about Arkansas Indian history; and the second one is to the Department of Arkansas Heritage that will develop an exhibition catalog, descriptive brochure, as well as a 35-minute video, that explore the history and culture of the Arkansas Delta region.

So, I think it is clear that we have been able over the past year to fund many projects that this committee, and the National Endowment, and the American people can point to with a great deal of pride.

Let me just, before I conclude, mention one difficulty. I have given you all the good news, and the bad news has to do with a restriction that was put into our legislation last year by the Appropriations Committee as a result of the quandary involving the National Endowment for the Arts. The restriction directed that we do not have the authority to make regrants.

We have tried our best to keep the regranting system alive, despite the Congress having said this in its advisory language, and it is not working that well. I just wanted to confess that to you. We are trying to do what you told us to do, and that is to be as responsible and informed about each of these regrants as we are about the grant that goes through our regular process.

It just is not working very well. What happens is that we get long lists of regrants to be made by institutions that have been given blocks of money, in the expectation that the funds will in turn be regranted.

What we find ourselves faced with are long lists of applications, some of which we wonder whether they would be funded through our regular programs; but unlike our regular programs, we don't know what the alternatives are, and we don't know what the opinions of the reviewers have been, and what leads to these recommendations.

We find ourselves in a veto position that makes us very, very uncomfortable, and I do not think that it is a good thing for the National Council on the Humanities and for myself to be continuing in such an ambiguous position. I worry very much that without clarifying language from the Congress, we will be unable to continue with these programs, and I worry about that very much because they are valuable.

And I would hope that you will hear from members of the different communities interested in this program about their value and the importance of further clarifying these matters. With that, I will conclude and answer any questions that anyone might have.

GALLUP SURVEY

Chairman **Byrd**. Very well. We will certainly be mindful of what you just said, and see if we can be helpful. Last year, the Endowment commissioned the Gallup organization to conduct a survey of nearly 700 college seniors to test their knowledge of American and world history and literature.

The poll was conducted through the use of a survey instrument that contained 87 questions about important historical figures, dates and events, as well as significant authors and literary works.

The results of the survey were startling, with 55 percent of the students earning an F, and another 20 percent earning a D, and only 11 percent of the respondents would have achieved an A or B. How were the questions developed for the survey?

Mrs. **Cheney**. The survey that you mentioned did indeed have rather shocking results. We found that one out of every four college seniors could not say within a correct half-century when Columbus sailed for the New World.

We found that one out of four college seniors had Churchill's words hopelessly mixed up with Stalin's. We found that one out of four college seniors, given a list of phrases and asked "do these phrases appear in the U.S. Constitution?"—we gave them one phrase which was a favorite of Karl Marx's, "from each according to his ability, to each according to his need"—and one out of every four college seniors thought that phrase was in the U.S. Constitution. [Laughter.]

So, the survey certainly did reveal the deep and tragic problem of historical illiteracy in this Nation. Many of the questions in this examination were based upon questions that had been developed in connection with the surveys of 17 year olds by the National Assessment of Educational Progress, which the Endowment funded in 1986.

Other than that, questions were developed to fill in holes, and give us a real overview of college seniors' knowledge of literature and of Western and world history.

TEACHING THE HUMANITIES

Chairman **Byrd**. Where is the shortfall in our society? Do teachers teach? Do students learn? Do they listen? Do parents not provide the necessary support? Do they have our values standing on their heads? I dare say that those students should be very familiar with the names of the leading athletes in the country, and they probably could do very well on a test of those athletes that are standouts in football, basketball, and the baseball world. How would you react to these?

Mrs. **Cheney**. All of the above are areas of difficulty. I think that it is always important to begin an analysis of American education though by saying that there are thousands upon thousands of dedicated teachers in this country, people who care deeply about their students, people who spend every minute that they can, learning as much as they can about the subject they are teaching, teachers who often spend their own moneys to bring into the classroom materials that their students will find enlivening and exciting.

But having said that, having pointed to the wonderful teachers that there are, it is also true that we have many teachers in our schools who have not had sufficient opportunities to know the subjects that they are teaching. Often what has happened is that they have been required to spend so much of their time earning a bachelor's degree taking courses in education, courses in how to teach, that they have not had as much opportunity as they themselves would like to have to study the subjects that they are teaching, and to know history.

And it is not just a problem in history. It is a problem in literature and mathematics and physics, and it is a problem across the board. We do not give teachers enough encouragement to know their subjects.

There is also a problem that once our teachers are in the schools we do not treat them as though they are intellectually inquisitive. We give them in-service training that is intellectually demeaning. I saw an in-service training program from Fairfax County, in which teachers were forced to spend time after school studying topics like "with-it-ness," and "continuum of attention moves," and such social-scientific jargon that parsed up common sense to the point where it no longer made sense.

We don't give our teachers opportunities to read novels, and to study history, to talk about philosophy, to try and understand poetry, and that is a problem as well. You did put your finger though on an essential problem—and that is the involvement of parents in the schools.

There are two things that the President has done in his education initiatives that are very important in both of these areas. One is alternative teacher certification. We should give people a chance to get into the classroom without going through traditional programs of teacher preparation.

That would help solve the problems of so much time that could be spent on subject matter being spent on petty things. Second, the idea of choice, to let the parents choose the schools that their children attend. Let them feel invested in the system.

Let the system thrive, because of competition between the schools, and that, it seems to me, is a very hopeful idea, and one that districts and States across the country are instituting.

NEH EDUCATION PROGRAMMING AND EMPHASES

Chairman **Byrd**. What specifically can the NEH do?

Mrs. **Cheney**. We have paid particular attention to teaching over the last 4 years since I have been chairman, and we have continued and expanded our programs to give teachers, once they are in our schools, to give those teachers the opportunities to renew themselves intellectually.

Senator Bumpers knows about our program of summer seminars for teachers. We also have institutes for teachers, multiyear programs, that allow them to study the subject that they are teaching. We have begun a program intended specifically to enrich in-service training periods.

So often, that in-service training time carved out of the school year for teachers, is wasted. It is not only wasted, teachers hate it. I have discovered as I have traveled across the country that teachers use that word passively. They say that they were in-serviced, as though something very rude had been done to them.

That is an area that we focus on, and we focus on college teaching as well. I am convinced the way people learn how to be good teachers is by having good teachers.

And all too often in our schools, and particularly in our colleges and universities, there is not enough reinforcement given to good teachers. Rewards in the profession go to research rather than to teaching.

So, we have also made efforts to help restore some balance between teaching and research.

50 HOURS

Chairman Byrd. The Endowment recently published a study which you wrote, and it is entitled, "50 Hours," and I have a copy of it in another room here. Its purpose is to inform colleges engaged in curricular reform about how other schools are managing the task.

The report is not a prototype, but instead, is intended as a resource for those who are working to improve undergraduate education, and the results of the Gallup poll certainly attest to the need to improve humanities education throughout the country.

The report's foreword indicates that it was possible to graduate from 78 percent of the Nation's colleges—and I am not telling you something new, as you wrote this, but for the record, it was possible to graduate from 78 percent of the Nation's colleges and universities without ever taking any course in the history of Western civilization; and 38 percent without ever taking any course in history at all; and 45 percent without taking a course in American or English literature; 77 percent without studying a foreign language; 41 percent without studying mathematics; and 33 percent without studying natural and physical sciences.

The suggested 50 hours of core curriculum included in the book consists of 18 hours of cultures and civilizations, 12 hours of foreign languages, 6 hours of mathematics, 8 hours of natural sciences, and 6 hours of social sciences.

What do you believe to be the cause of our colleges and universities overemphasizing majors and electives at the expense of a core curriculum, and what percent of the Nation's colleges and universities currently have your core curriculum?

Mrs. Cheney. I have seen a statistic that about 2 or 3 percent of the Nation's colleges and universities have core curricula. Others have distribution systems that are thoughtfully constructed, distribution systems that ensure that by the time you earn a bachelor's degree you will have taken a history course, and you will have taken a math course, and you will have taken a course in natural sciences.

But it is also true that at many, many colleges and universities it is easy to graduate without having explored major areas of human knowledge. Part of the difficulty is the philosophy that grew up during the sixties that said that students would learn best when they studied exactly what interested them.

It is an idea, a way of thinking, that I think has been generally discredited. There is consensus about the notion that students coming to college deserve some guidance about what they should learn.

Once having let that horse out though, it is difficult to get it back in and close the barn door, particularly when you have in place a reward system that rewards highly specialized research, and that is not the kind of knowledge that is required to teach these broad-based courses that are typical of core curricula, that are typical of the very best kind of general education.

I sometimes say that the main impediment to a core curriculum is that nobody wants to teach in it. The entire reward system does not reward the kind of study that is required to do core teaching.

I sense maybe we are about to see a change in that. You know, I see university leaders beginning to emphasize the importance of teaching again. If we have teaching properly emphasized, we will see better curricula in our colleges and universities.

I regard it as important for parents and for students looking at a college or university to really read college catalogs, to see what is required, and see what kind of plan of study has been advanced.

And when they do that, when they read the catalog, and try to see what kind of plans for learning a college or university has set forth, that will be a very powerful motivation for reform.

EMPLOYERS AND HUMANITIES EDUCATION

Chairman BYRD. To what extent have you pitched your curriculum with many of the prospective employers of the students of these colleges and universities? Unfortunately, many employers look for students who are well-trained, possessing technical skills, and are not willing to invest in the training of a well-educated student who perhaps majored in history or literature.

And it seems that unless we are able to instill in corporate America a belief in the value of the humanities, and in the value of a well-educated work force capable of critical thought, evaluation, and analysis, we will continue to be plagued by generations of students incapable of passing the fundamental tests we discussed earlier.

So, my question was, and let me say it again, to what extent have you pitched your curriculum with many of the prospective employers of the students of these colleges and universities that we have been talking about?

Mrs. CHENEY. I have talked to business audiences at every possible opportunity. We were in California not long ago talking to a business roundtable group there; and what I found, in fact, is that the CEO's of major corporations are very much in agreement about the importance of a liberal arts education in the people that they hire.

What is also true though is that word does not filter down through the corporate hierarchy to the recruiters that go to the campuses, and that is a point that I have been making lately—that the people sitting on top of large organizations, the people who do understand the value of a liberal arts preparation, need not only to give an elegant speech once a year affirming the importance of a liberal arts education, but they ought also to send memos down so that people doing the recruiting on college campuses are aware of it, too.

Chairman BYRD. Mrs. Cheney, I don't want to monopolize the time here. I have a good many other questions, most of which I will submit for the record.

I would like now to turn to Senator McClure, the ranking member of this subcommittee, for questions, and then we will give the other Members present an opportunity as well.

REMARKS OF SENATOR MC CLURE

Senator MCCLURE. Thank you very much, Mr. Chairman, and I want to thank you, Mrs. Cheney, for your appearance and your testimony. Your answers seem to indicate the reason why the President selected you for this position that you now hold, because you obviously have both a grasp of the subject and of the problems that confront us.

I could not help but smile a moment ago when you were talking about sometimes teachers are not well prepared, and I will hope not to bore the committee with a recitation of a personal experience I had about 2 months ago in Idaho.

I arrived at a community in Idaho, and I went to the desk of a rental car agency to pick up my automobile, and a friend of mine who had met me at the airplane was standing there with me when I was arranging for the automobile, and the young lady who was waiting on me, who was 19 or 20 years old, didn't know me, and I used my credit card that did not identify me.

And she was asking some questions, and my friend was very interested in the fact that although I had been in public office for nearly a quarter of a century, this young lady did not recognize who was standing there. It didn't bother me, but it bothered him, and he made some comment about do you know that this is your Senator, and she looked up, and kind of shrugged her shoulders, as if to say so what, which I also understood. [Laughter.]

But then he said, do you know that Idaho has two Senators, and she looked a little puzzled at that kind of a question, and did you know that we have two Congressmen, and she confessed that she didn't.

And he said, well, did you go to school in Idaho, and she said, yes, I graduated last year, and he asked, well, did you have a course in government? She looked up at him, and she said, well, I learned a lot more about football and basketball than I did government.

And I said, oh, the coach was your teacher, and she said, yes. Now, that is a pattern. Nobody wants to teach history, or government, and so the coach gets the assignment. He does not want to teach it either, but he has to have something to do besides coach.

Senator **Bumpers**. Senator McClure, would you yield at that point?

Senator **McClure**. Yes.

Senator **Bumpers**. It is almost imperative in my State that you be a coach before you can become superintendent. [Laughter.]

Senator **McClure**. Well, that is another question. The only way to get any upward mobility is to go into administration, and you have to get out of the classroom to get any rewards from the educational system. We have something there that I think everyone understands very well.

NEH'S 25-YEAR RECORD

I would like to ask you a couple of questions, general philosophical ones perhaps. This year marks the 25th anniversary of the National Endowment for the Humanities. The enabling legislation declared that "democracy demands wisdom and vision in its citizens, and that the study of the humanities requires constant dedication and devotion."

During the 4 years you have been the Chair of the Endowment, how would you rate the NEH's performance?

Mrs. **Cheney**. I think that we have done a job of which we can be very proud. Because our 25th anniversary is coming up, I have been taking the long perspective, considering what good has the Endowment done over a quarter of a century, with its modest funding.

I think it would be presumptuous for me to look at larger trends in the humanities and credit them to what really is an agency with a history of modest funding, but one area in which I think we can have a great deal of certitude about the effects of public moneys having been well spent is the area of public humanities.

In the last 25 years, we have absolutely seen a blossoming of public interest in the humanities in this country. Now, we tend to spend a lot of time focusing on the failures of our schools and colleges and universities, and it is very important that we do that.

But it is also important that we recognize these other trends, this upsurge of interest in reading good books and going to museums, and watching well-crafted and learned programs on public television.

I am struck when I look at the New York Times best seller list and see really fine works of history recently, such as James McPherson's "Battle Cry of Freedom," for example, and important works of literature. Gabriel Garcia Marquez has been on the best seller list frequently.

There is a new trend in bookstores. You know, it used to be that the chains dominated everything, and they were only buying 10 titles, and now bookstores are expanding their range, and offering people services, and people are looking for more serious works to read.

Reading and discussion programs in libraries are my favorite example of how public programs in the humanities have burgeoned. Ten years ago in Vermont, where these programs started—well, a little longer now—it was in 1978, 12 years ago, when 100 people gathered in Rutland, VT, to attend a reading and discussion program in a library.

A scholar came in from a local college, and people from all over the town, and people with all sorts of backgrounds, came together. One hundred people signed up for this program.

In 1988, in Vermont, there were 20,000 people participating in that program. It was such a successful model that it was replicated across the country through the American Library Association.

So, there are—well, my trusty OPB person here is pointing out to me that reading and discussion programs exist in Oklahoma, "Let's Talk About Oklahoma." And another one in Idaho, a library reading and discussion program run by the Idaho State Library.

So, I think that public funds expended by the Endowment have met an important need, and, in fact, encouraged people to become more curious and interested in a study of the humanities. That is an area which I think we can point to with some certainty and say that the Endowment made that happen.

EDUCATIONAL REFORM

Senator McClure. What is your vision for the next 25 years?

Mrs. Cheney. That's really hard. I sometimes think we will still be reforming schools in the year 2015.

Senator McClure. Well, I am sure we will, and I hope that we are. I hope that we are not just talking about it.

Mrs. Cheney. But I have become discouraged sometimes with the pace of reform, especially when I think about teachers, for instance. How long have we heard people complaining about teachers wasting their time in teacher preparation programs that turn out not to be valuable, for example.

And that has been going on for 20 years or more, but I think now we are on the crest of change. We really are seeing things like alternative certification, for example, that promise a breakthrough in that area.

I came across a quote by John Stuart Mill, where he said that any reform worthy of the name is always slow, but I do become discouraged by the——

Senator McClure. You sure have a lot of good and worthy reforms, if that is the test. [Laughter.]

Mrs. Cheney. American education, to give it its due, does something that education in no other country tries to do. We have an amazingly diverse population, and we are committed as a people to educate every member of that population to the highest level of which he or she is capable.

I guess the keynote of the next 25 years will be education.

DECLINE IN NEWSPAPER READING

Senator McClure. Let me ask a couple of specific questions, and then I will submit the balance of my questions for the record. A recent article in the Washington Post stated that fewer and fewer young people are reading newspapers. Obviously, that message is coming from the newspapers and is intended for those who do read a newspaper. Does that situation concern you?

And have any newspapers contacted you and asked for your ideas or advice on how to get more people to read newspapers?

Senator **Bumpers**. Senator McClure, I did not hear the first part of your question. Would you repeat that?

Senator **McClure**. A Washington Post article stated that fewer and fewer young people are reading newspapers, and I just wondered if that concerns you, and second, if any newspapers have contacted you to see if you have any advice as to how to change that?

Mrs. **Cheney**. Well, I am always happy to give free advice, especially to the media, and so if I am contacted, I would be happy to respond. Yes, indeed, it does concern me. Newspapers are unfolding history, and it has been a common and basic belief in this country that a strong democracy depends upon a well-informed citizenry, and almost every one of the founders made that point at some time or another. So, yes, it is a concern.

Newspapers also report very interesting things about the decline of historical literacy in this country. The Washington Post did a front page story a few months ago about teachers going into their classrooms across the country and talking about the marvelous events that have been unfolding in Eastern Europe.

And the teachers who understood the significance of these events were thrilled to be able to talk about them, but they found on the part of their students a very flat response.

And as one teacher analyzed it, she said, you know, these youngsters don't know enough to be thrilled and moved at as she expressed it, the death of communism, because they don't understand what communism is.

Senator **McClure**. And the same thing is true in my office. Last November 9, as the Berlin Wall was falling, I was excited, and I went back to my office and talked to the people on my staff, most of whom were relatively young people. They did not have the same sense of excitement that I did.

The event was not as relevant to them, and I put it down as a generational difference because we had lived through an era and we just could not avoid absorbing information over a long period of time that told you something about the significance of that event, but it is not taught in a way that meant anything to the young people who hadn't lived during that era.

HISTORY TEXTBOOKS

Mrs. **Cheney**. One of the happy developments in education is that people have begun to write reviews on textbooks. This is very important because typically the people who select textbooks for our schools are very busy, and they are overburdened, and they don't have time to read the books that they are choosing, and so they sort of flip through and have to pick among them on the basis of graphics, or maybe a table of contents, or the index.

People reviewing textbooks are doing a great service, because they are providing information to those who are in charge of selecting the textbooks. A recent review of textbooks, and this one was done by Gilbert Sewell of the American Textbook Council, reviewed what textbooks told about the history of Eastern Europe, and it was very revealing.

Either there was almost no information presented in world history or Western history textbooks about Eastern Europe, or often what was presented was inaccurate. That is part of the problem. Another part of the problem is that even when the information is presented in a complete and accurate fashion, it isn't well written.

PROBLEMS OF AMERICAN EDUCATION

Senator McClure. Well, there are two levels of education that concern me. One is in the primary and secondary schools, where we tend to educate down to the average or a little below, and very little challenge for the exceptional child, and there is very little that the average finds very difficult to achieve.

It is geared at helping along those who are behind, and I don't object to helping those that need additional help, but I do object to bringing the whole level of education down to the level of the slowest.

And the second one is the one that you focused on in your report of "50 Hours," and that is whether or not postsecondary education really does more than just job training. Job training is important. I am a graduate of a professional school, and that is where my degree is; however, with all due respect to my study of the law, the most stimulating time I had was in the first 2 years of college before I went on to law school and specialized.

I didn't think I would ever live long enough to be able to take all the courses that I wanted to take, because I was interested in them, and then I went to law school, and I got out into the world, and became too busy to be worried about things like that.

So, I am very much in tune with the idea that there are some core curricula in the humanities that need to be taught, just as I think that there are some basic subjects that need to be taught in primary and secondary schools.

In fact, we should not just permit them to take the things that are most interesting, such as giving a high schoolboy the opportunity to take nothing else other than what he wants. If we do, then he is going to take athletics and auto mechanics, and neither one of them is bad, but they are not wholly fulfilling either, for the present or for the future.

I encourage your efforts to continue to focus on what you can do from the perspective of the Endowment to lead people into broadening the curricula of schools; and, of course, for those who are never going to get all they want, and for the many who didn't get what they need, we also have to try to look at posteducational opportunities, and postschool opportunities, for the continuing education that ought to be a part of the life of every one of us.

And that is sadly lacking in our society. Senator Byrd made a comment that if the Gallup poll had included the names of the athletes, they could have answered those questions with greater accuracy.

And I would say, too, if it included the names of the entertainers, and the rock stars—and I have nothing against the rock stars, but I refuse to play Trivial Pursuit, because if I do well in the first part of the game, I get down to where my opponents can choose the category that I have to answer, and they go to entertainment every time, because they know I won't do well. [Laughter.]

And I swallow at that point, while everybody else passes me. So, I will only play Trivial Pursuit when I have a partner that knows something about that area.

And I don't say that to condemn. We in our society spend millions and millions of dollars on entertainers and athletics, but the teachers in the classrooms across this country, are inadequately compensated.

The judgment of most of the people that I talked to is that they are inadequately compensated because that is all they are worth, and that is a cruel, and misleading statement of the education system; however, it also says that we have not done much in terms of actually changing the educational system, or the perception of the educational system that we have in America.

And you made a comment about studying it more and reforms that are worthwhile are also slow, but I am frustrated by the slowness of trying to reform the educational system in this country because I think there is so much that can be done and so little that is being done to actually focus on anything other than just the dollars that go into it.

IMPORTANCE OF TEACHERS

Mrs. CHENEY. Building respect for teachers is very important, and I try to visit with teachers whenever I am traveling. I visited recently with a group of teachers in Bremond, TX, a little town between Dallas and College Station.

And they were in despair at the difficulty of commanding the respect of their students, because they did not feel that they had the respect of their community, and they particularly talked about television and movies—television programs and movies that disparaged the role of teachers.

They talked about "Ferris Bueller's Day Off," for example, and about an MTV video that makes teachers appear ridiculous, and about "Risky Business," another movie. But I have seen in the last 2 months at least a trend in the other direction, at least on the part of books. There are some wonderful books out now, such as Tracy Kidder's "Among School Children" that follows an elementary schoolteacher around.

Also, a book by Mr. Freedman, called "Small Victories," and it follows a teacher, Ms. Siegel, around a New York City school. It gives an idea of good and committed and dedicated teachers who are working under the most difficult circumstances, and doing a good job. We need to honor those people, and to give them the respect that they are due.

Senator MCCLURE. Thank you very much. Mr. Chairman, I will submit the balance of my questions for the record.

Chairman BYRD. Very well. Senator Bumpers.

HUMANITIES EDUCATION

Senator BUMPERS. Thank you very much, Mr. Chairman. Mrs. Cheney, let me say, first of all, that I know that anything that you and I have in the way of discourse here is both of us preaching to the saved because I can tell from everything that you have said so far that we share a concern about the same things.

This is a multifaceted problem. You know, there isn't any one single approach to it, but you know the one that I have taken, of course, and the one that concerns me the most. Incidentally, Mr. Chairman, I have just finished doing a whole host of high school and college graduations in my State, and I have a little story that I told to a lot of high school graduations about the little boy coming home from school, and his father said, well, how did you do on the English test today, and he says, I done good. [Laughter.]

He said, well, I just made one mistake, and I seen it just as soon as I done it. [Laughter.]

Now, what is really tragic is that nobody laughs. [Laughter.]

And, you know, you begin to realize the problem is much greater than you thought it was. We used to have a fellow who wrote for the Arkansas Gazette, and he had a very liberal elbow, but he was a great writer. And one night when I was an undergraduate student at the University of Arkansas, somehow or other I got invited to the annual journalism banquet, where Spider Roland, this writer, was going to be the speaker.

And at a reception, Spider was talking to a group of people, one of which was a farmer from east Arkansas, and one of those wealthy planters, and we don't have any wealthy planters any more, but we did then, and he said, you know, Spider, I have concluded that a thorough knowledge of the Bible is probably better than a college education.

Spider said, hell, a thorough knowledge of anything is better than a college education. [Laughter.]

But the reason I have taken on this subject of the humanities is because I think that is really the most dangerous threat, and with the utmost respect to Secretary Cheney, I keep making the argument that these things are as important to the national security of this country as how many tanks, guns, and planes we have.

And I am not saying that because you are here. I have said that in many, many speeches, and I firmly believe it, but we have 2 million plus teachers in this country, and we have made, according to everything that I have seen, very little progress in this whole area, especially with the humanities in the eighties.

And I think the reason is not because we don't know what to do, but really because we have not really attacked it on a big scale. So, it seems to me that if we are really serious about stopping the slide of the cultural and political and historical illiteracy in this country, it is time that we approach it.

First of all, we have got to re-educate a good number of these 2 million plus teachers. I mean, you can talk about parental involvement and all these other facets of the problem, and they are great, but it is very difficult.

My wife is an elementary schoolteacher, and she taught me early on that if you don't have parental involvement you are really swimming against the tide. You may succeed, but the odds are against you.

So, having said all of that, let me ask you the first question on a subject that Chairman Byrd asked you about, and that is about 80 percent of the students who could graduate without studying Western civilization or American history. Are you saying that they could, or that they did?

Mrs. **Cheney**. That it was not required. That it was possible to earn a bachelor's degree without studying any of those courses.

Senator **Bumpers**. Without studying any of those courses?

Mrs. **Cheney**. Yes.

SUMMER SEMINARS

Senator **Bumpers**. Now, your approach in these summer seminars for elementary and secondary schoolteachers, as you know, is the matrix for my so-called humanities bill that I have been struggling with now for 6 years. I think something is going to happen this year, but I am not sure how.

And you may, or may not know, Senator Pell, who is the chairman of the Education Subcommittee over here, and his staff and my staff, have been trying to work out some compromise on what I have been trying to do, because my entire $50 million authorization is not to NEH, but it is the summer seminars program of NEH that was the matrix for this bill.

And my question is—I know that you know something about the bill—do you support it, completely aside from who is going to administer it, whether it be NEH, or the Department of Education?

Mrs. **Cheney**. I would be reluctant to support an immediate infusion of $50 million into this program, leaving the administration and other considerations aside. We have found that programs like this grow best slowly.

First of all, we are only now beginning to build a cadre of people in colleges and universities who are interested in directing these programs. That has been a source of some difficulty because it is not the kind of effort that is rewarded in tenure and promotion decisions. For a college professor without tenure to go teach in one of these seminars is for him professionally speaking, or for her, a waste of time.

That kind of activity is not valued by the colleges and universities. There are many people who do it nonetheless, and many people who are tenured undertake it, but I worry that such a large infusion of funding might have the disadvantage of not having the kind of infrastructure in place that could accomplish the goals of the program.

There are many worthwhile efforts underway on behalf of our State humanities councils to sponsor such programs, and I have heard from them anecdotal information which I can confirm in other ways myself.

You made the point a while ago that superintendents and supervisory personnel in our schools often do not value this kind of activity. They think what is important is the kind of activity that leads to a master's degree in education so that you can become an administrator.

They don't, not having been trained in a content area themselves, give it great value. So they often make it difficult for teachers to participate in these programs. There needs to be a kind of process of education that goes along with it.

But that aside, and speaking very frankly, I really had not thought you would put a question to me quite in that form.

SCHOOLTEACHER PARTICIPANTS IN SEMINARS

Senator **Bumpers**. Let me ask a follow-on question of that then. Over a 2-year period, in 1983 and 1984, the Mellon Foundation, I think they put in $500,000 in each of those years. I know, for example, that one of the first seminars was conducted at the University of Texas on Homer's "Odyssey." The seminars program had something like 4,400 applicants for 225 slots in the first year.

And my point is not that all 4,400 should have been accepted, but there is tremendous interest among elementary and secondary schoolteachers in this approach. Over an 8-year period, and this is certainly not your fault, and we are talking about budget constraints and a lot of other things that inhibit us around here—but in 8 years, NEH has touched 4,800 teachers.

That is 8 years, and just about 600 teachers a year. Now, in that entire 8-year period, you have touched two-tenths of 1 percent of the elementary and secondary teachers in this country.

Mrs. **Cheney**. Well, through that particular program we have reached many teachers. This same kind of effort that I know both you and I support, is also sponsored by the Council for Basic Education through a regrant program supported by NEH. This runs into millions of dollars, and reaches hundreds upon hundreds of teachers.

A similar kind of activity is supported through the NEH/Reader's Digest Teacher-Scholar Program, which has been a $4.5 million program over 3 years.

Senator **Bumpers**. I am familiar with that one.

Mrs. **Cheney**. Educational opportunities for schoolteachers also are supported through humanities institutes funded in our Division of Education Programs. I agree that the number is small, and I would like to see it grow in the years ahead.

Senator **Bumpers**. What is the average size of these seminars? How many students attend each one?

Mrs. **Cheney**. Thirty.

Senator **Bumpers**. Thirty?

Mrs. **Cheney**. Yes. Well, summer seminars have 15 teacher-participants and humanities institutes have 30.

Senator **Bumpers**. Thirty in institutes?

Mrs. **Cheney**. Yes; the number of attendees is 30 in an institute.

Senator **Bumpers**. That's what I wanted to know. The average is 30 per institute; is that right?

Mrs. **Cheney**. Yes.

Senator **Bumpers**. Well, now, you have already had 2,500 applications for 1990, and you are telling me that you are only going to be able to accommodate what, 400; is that right?

Mrs. **Cheney**. I don't know where your figures came from. Is that correct?

Senator **Bumpers**. That is what my staff gave me. You have had 2,500 applicants for 1990 summer institutes. She tells me that this is all your fellowships and seminars and institutes. Do you have others besides this one in that program, in that part of NEH?

Mrs. **Cheney**. Well, many of those numbers that she said, or is talking about, represent scholars from colleges and universities who receive support through our fellowship division.

Senator **Bumpers**. Well, you have 3.8 million——

Mrs. **Cheney**. Frankly, Senator, I don't know the number, but I would be glad to supply it for you for the record.

Senator **Bumpers**. OK.

[The information follows:]

SUPPORT FOR SCHOOLTEACHERS—FISCAL YEAR 1991 REQUEST

Program/project	Funds requested	Projects (estimate)	Participants (estimate)	
			Applicants	Awards
E&S institutes	$4,250,000	25	2,625	750
Council for Basic Education [1]	726,000	1	1,800	[2] 175
NEH/Reader's Digest teacher-scholars	1,000,000	53	570	53
Summer seminars for schoolteachers	3,600,000	55	2,500	825

[1] NEH supports the Council for Basic Education's [CBE] summer fellowship program for elementary and secondary schoolteachers.
[2] Includes a small number of awards supported by CBE.

HUMANITIES

Senator **Bumpers**. Well, I think that the only disagreement that you and I have is that I think we—first of all, I support this, and I know that you do, too.

Mrs. **Cheney**. Yes.

Senator **Bumpers**. And when I hear things, like the chairman pointed out a while ago about students, you know, I was in Leipzig just 3 days before the East Germans voted, and those people were so rhapsodic. They were not just rhapsodic about democracy. They were rhapsodic about knowing the FRG is going to come in and clean up those dirty plants.

And, you know, 3 days after I left there, 93 percent of the people in that country voted, and I come home and Texas has just had the hottest gubernatorial contest in its history, and 30 percent voted; and yesterday in California, one of the hottest elections in the history of that State, and 43 percent voted.

You see, I think that this is all very dangerous; and last year, and I don't know who does it, but they do it every year—some group did a poll of high school seniors of who they admire most. I have cited these several times, and I can't remember all of them, but there were Oprah Winfrey, Bill Cosby, Jesse Jackson, Larry Bird, Michael Jordan—I picked Michael Jordan, too. [Laughter.]

Oliver North, Arnold Schwarzenegger, Patrick Swayze, and a couple of others like that. Now, this is back to Senator McClure's Trivial Pursuit. My kids, when we play Trivial Pursuit, they are just like yours. They always take entertainment, and I am lost.

But my point is that the Pope didn't make it, and Gorbachev didn't make it, Reagan didn't make it, and Bush didn't make it, and Mother Theresa didn't make it, and poor old mom and pop didn't make it.

And to me, that is a manifestation of a very dangerous thing in this country. I can't imagine, even as an 18 year old, and we have a tendency to be sort of, what shall I say, self-serving, and arrogant around here about what we know at our age, and not what we knew when we were 18.

But, still, I can't imagine at 18 not having picked my father as my No. 1 hero, and I am telling you that unless we do something a lot more dramatically than we have done in the past about dealing with this, this situation is not going to get any better.

The political system in this country is in great trouble, and, of course, I happen to believe that this great political process that was set up for us by what Arthur Schlesinger said was "the greatest assemblage of minds ever under one roof," is being insidiously corrupted by money. But it is also being just as equally corrupted by the ignorance of youngsters who are turned off by it.

Now, if I want to really clean out the room at my house when all my family is there, all I need to do is to start talking about my days in the Marine Corps. They all get up and leave and they don't want to hear it.

Mrs. **Cheney**. It's not that way in my family. [Laughter.]

Senator **Bumpers**. Well, I have some homework to do then haven't I? [Laughter.]

And I recognize that my children have no memory of the Berlin Wall being built, and do you know that the networks, all three networks said that they lost viewer share every time they turned to those revolutions that were going on over there; whether it was even Romania, where the people were being killed on the screen for you.

But the youngsters of this country were not interested in that, and they did not relate to it, and they certainly have no memory of it, and I understand that. I can remember hearing people talking about World War I when I was a child, and I had a hard time relating to that, too.

Well, Ms. Cheney, first of all, I think that you do a fine job. I know that your heart and mind are both in the right place, and the only disagreement that we have is about how quickly we are going to approach what I consider to be the chief problem in this developing cultural, and historical, and what shall I say—demise—in this country. It is serious, and we are not doing very much right now.

Mrs. **Cheney**. The point on which I think there is absolute agreement, I'm sure, around this table is that given all the possible angles in which we can approach this devastating problem of our schools, sometimes it seems so complicated, and there are so many problems, and where do we start.

I do think that teachers are the place to start. Teachers are central, and if we have good teachers, they will bring good textbooks. They will make good curricula. Teachers are the place to start.

Senator **Bumpers**. Thank you, Mr. Chairman.

Chairman **Byrd**. Thank you, Senator Bumpers. Senator Nickles.

COORDINATION OF PRESERVATION ACTIVITIES

Senator **Nickles**. Mr. Chairman, I will just be very brief. I will ask you one question, Mrs. Cheney. I notice in your budget that you have $19 million in for book preservation; is that my understanding?

Mrs. **Cheney**. Yes.

Senator **Nickles**. We have under the legislative branch bill——

Mrs. **Cheney**. Legislative what?

Senator **Nickles**. The legislative branch appropriations bill, which includes the Library of Congress. The Library of Congress has a very extensive multimillion dollar, multiyear project in the works for book preservation. Are you coordinating your efforts with them to some extent?

Mrs. **Cheney**. Absolutely. This preservation initiative has perhaps been the best coordinated humanities project in the history of the United States. There is an enormous coordination of various participants in it.

The Library of Congress, for example, is in the business of deacidifying books, and this is an area that we are not participating in at all. Our efforts are going into preserving the knowledge that is in deteriorating books; that is, microfilming books that are about to crumble forever, as well as training people in conservation efforts.

So, there is a great deal of coordination, and it is an enormous problem.

Senator **Nickles**. Well, I would agree that it is a significant problem. I would just hope that we would not have a lot of duplication in efforts, and I would encourage you to coordinate your efforts so that we don't spend a lot of time and waste a lot of resources toward the same objective.

Mrs. **Cheney**. Exactly.

Senator **Nickles**. Thank you very much.

Chairman **Byrd**. Senator Cochran.

NEH FOREIGN LANGUAGE SPECIAL EMPHASIS

Senator **Cochran**. Mr. Chairman, thank you. I just wanted to welcome our distinguished witness today. Dr. Cheney, I think you are doing an excellent job in your capacity as the Chairman of the National Endowment for the Humanities, and I congratulate you on that.

I noticed in your request for funds this year there is about $17.9 million requested for education programs, and that is broken down into categories, one of which is foreign language education. I don't believe that has been funded before.

And we have been having hearings in our Education Subcommittee in the Labor and Human Resources Committee on the importance of foreign language instruction in our Nation's schools today. I wonder how you are going to use that money. Is that going to be put out to the States in grants? How do you intend to use that $2.5 million for foreign language education and allocate the funds to the States and local communities?

Mrs. **Cheney**. We have put out guidelines, suggesting areas in the Endowment where we would be particularly interested in receiving projects. The focus of the projects should be on teaching. What we find is happening right now in the United States is a growing concern about how important it is for us to know other languages.

The international administration of business, among other things, has brought the point home that we don't have qualified teachers to go into the schools and participate in classes where there is a great deal of interest to learn other languages.

So, teacher institutes, in particular—and Senator Bumpers will be interested in this—offer opportunities for teachers to develop greater skills and greater effectiveness in languages, as well as greater knowledge of other cultures. That will be the centerpiece or focus of our efforts.

Senator COCHRAN. Thank you very much. Thank you, Mr. Chairman.

Senator BUMPERS. Mr. Chairman, are you about to dismiss this witness?

Chairman BYRD. No; please go ahead and proceed.

Senator BUMPERS. May I ask one question?

Chairman BYRD. Of course. Yes, indeed.

EXPANSION OF SEMINAR PROGRAMS

Senator BUMPERS. Mrs. Cheney, how quickly could you expand all of your summer institute programs, both for teachers and for college level people?

Mrs. CHENEY. What is the budget line on it right now?

Senator BUMPERS. It is $3.6 million, isn't it?

Mrs. CHENEY. $3.6 million? Well, I think we could probably responsibly double it in a year.

Senator BUMPERS. Could you triple it?

Mrs. CHENEY. Maybe in 2 years. It really——

Senator BUMPERS. If you could double it, say, in 1991, and triple it in 1993, or something like that, and we are talking about a 5-year possibility here.

Mrs. CHENEY. That would probably be possible. The important thing is that the teachers are there as you so correctly point out. But finding the facilities and finding the college personnel who want to become involved in this project are the keys to making it succeed.

Senator BUMPERS. Incidentally, what is the average stipend that you pay these teachers to attend these institutes?

Mrs. CHENEY. $3,750.

Senator BUMPERS. They pay their own room and board and everything?

Mrs. CHENEY. Well, it comes out of the stipend.

Senator BUMPERS. You see, that is very important. That is an expensive part of this, but that is very important.

Mrs. CHENEY. Well, it is as important for the professors as it is with teachers.

Senator BUMPERS. Well, it is also important from an economic standpoint. I mean, a lot of them have children, and they have all kinds of problems, and they just can't leave home and take off for 9 or 10 weeks at a time in the summertime, or whatever length the seminar is.

And most of them don't make enough money to do it on their own, unless their husbands or wives are gainfully employed, also.

Mrs. CHENEY. I should provide you some of the letters that I have received after these seminars.

Senator BUMPERS. They are really gratifying?

Mrs. CHENEY. Yes.

Senator BUMPERS. I bet you have never had a bad one have you?

Mrs. CHENEY. Well——[Laughter.]

I mean, when they go wrong, it is typically because the accommodations weren't good, and it has nothing to do with the intellectual substance of the seminar.

Senator BUMPERS. But I just don't know of a program that the Government puts money into that has this overwhelming approval from the people that participate in it as that one does. I have talked to so many of them, and I have had letters from them, and they are all just so rhapsodic about what they learned.

Mrs. CHENEY. That is absolutely true. I can understand why you are enthusiastic about them if you have seen those letters and have talked to participants.

Senator BUMPERS. I have.

Senator MCCLURE. Mr. Chairman, there is just one question that I missed that I would like to ask Mrs. Cheney if I might.

Chairman BYRD. All right.

ACCOUNTABILITY AND FEDERAL FUNDING

Senator MCCLURE. In your opening remarks earlier, you talked about the language that we inserted last year with respect to the regrants.

Mrs. CHENEY. Right.

Senator MCCLURE. And you say it is not working very well, and I hear you, but one of the problems that we were trying to address for both Endowments was the question that we ran into when grants were made in the field of the arts, and it ended up in production of materials that some people questioned, and the response that we got was we are not responsible. Not me.

Mrs. CHENEY. I can see why that is disconcerting.

Senator MCCLURE. Well, it is to us, and yet I can understand that you have great difficulty. We are trying to find a way to reach accountability. Now, one of the suggestions this year, and one problem in which I have not made up my own mind at the present time, is to shorten the string a little bit on accountability by making the grants for the States directly, and allowing them to make the regrants rather than pulling it through you.

Now that would reduce the amount of budget that you have and increase the amount of budget that was in the hands of the States for administration. I would like your comment.

Mrs. CHENEY. I think it is a terrible idea.

Senator MCCLURE. Can you tell me why other than the fact that you are losing the money?

IMPORTANCE OF NATIONAL PROGRAMS

Mrs. CHENEY. There are many, many programs in humanities that simply require this national coordination, and this national viewpoint. We try very hard to make sure that people in all regions of the country are aware of our programs, and are applying for them.

But—well, let's take the most expensive project that we do. We have a nine-part television series coming out in the fall on the

American Civil War. It is a wonderful television series. This requires a central administration and a large amount of money. This requires the ability of a central agency to expend money in a way that will benefit the Nation as a whole.

In our Editions Program, projects to collect the papers of George Washington and other Presidents, papers of Frederick Douglass, and Martin Luther King, are enormously expensive. That means a central kind of coordinating effort. Even with the seminars that Senator Bumpers is talking about, we try very hard to make sure that they are scattered across the Nation as a whole, and we call on scholars from all parts of the country to help teachers in other parts of the country.

It is a problem, but I think funding everything through the States would cause a good deal of harm in the process.

Senator McClure. How can we strengthen your capacity, or how can you strengthen your capacity to be accountable for the expenditure of the money if you don't know where the money is going to go?

Mrs. Cheney. Well, the organizations to which we give regrants are large institutions, the International Research and Exchanges Board, for example, is a large, scholarly organization that makes it possible to send American scholars to study in Eastern Europe and in the Soviet Union, and this is not the easiest thing in the world to do.

It is getting a little easier, but scholars need time and access into archives and libraries and so on. And fellowship grants and other grants to these scholars help lead the way for them.

Accountability happens in this way: IREX is given a block of money, and they award it in regrants. After the fact, we look at what they have done, and when they apply to us again, we evaluate what they have done. Our peer review panels, and the National Council on the Humanities, and myself, make a decision about whether they have been responsible with that money, and I think it is accountability of a very fine kind.

But what it also does, and I know that this idea will appeal to you, Senator McClure, it assumes that not all wisdom and knowledge reside in Washington, that there is a great deal of talent out there in the Nation as a whole, and that the people at IREX, for example, can be trusted to make good decisions. We not only trust, we verify.

Senator McClure. I have heard that before. [Laughter.]

STIPEND INCREASE

Chairman Byrd. You are proposing to increase the allowable stipend from $27,500 to $30,000 to reflect increases in faculty salaries in recent years and to provide more adequate financial support for scholars and teachers in the humanities.

The budget for these programs remains essentially level with the fiscal year 1990 level. How do you propose to pay the additional amount for each stipend without a commensurate increase in funding? Will you award fewer stipends?

Mrs. Cheney. Yes; and it is a tradeoff. My National Council, in particular, felt that it was important that after many, many years at the old level that we raise the stipends. In fact, they recommended raising it even higher. In a time when there are all sorts of fiscal pressures in Washington and when the budget deficit is a matter of great concern, we did not feel that we could do both, to maintain the level of fellowships and to increase the stipend, and so we chose to increase the stipend.

Chairman BYRD. You would rather have done both would you not have?

Mrs. CHENEY. In a perfect world, that is what I would have done, yes.

Chairman BYRD. Was this level chosen due to budgetary constraints?

Mrs. CHENEY. Yes.

Chairman BYRD. Will instructors be able to engage in different study and research activities as a result of the higher stipend?

Mrs. CHENEY. No.

Chairman BYRD. What amount of money will be needed to reach the increases in faculty salaries and at the same time continue the level as to the number of stipends?

Mrs. CHENEY. Probably $300,000.

Chairman BYRD. $300,000 more than what the budget reflects?

Mrs. CHENEY. Yes.

Chairman BYRD. What was requested at the OMB level?

Mrs. CHENEY. What we got is what you are seeing, and that is what we requested. I don't know if I am even supposed to talk about this, but that is——

Chairman BYRD. Well, we are supposed to ask the question, and we want an answer. [Laughter.]

Senator MCCLURE. You are not supposed to volunteer.

Chairman BYRD. We know that you are not supposed to volunteer, but I think it is evident here, and as Senator Bumpers has said, you are talking to the choir and we are talking to each other, and we all believe in this, in what we are talking about, and we want to be helpful.

Mrs. CHENEY. You do understand that I went to OMB and requested large increases by Endowment standards in our research division for the wonderful scholarly editions that I was talking about and for our foreign language initiative. You have to sort of set your sights and your priorities. You can't do everything at once.

Chairman BYRD. Now, would you state for the record what you requested at OMB?

Mrs. CHENEY. For what?

Chairman BYRD. For all those things that you just mentioned.

Mrs. CHENEY. We got our OMB request.

Chairman BYRD. You got what?

Mrs. CHENEY. OK. I stand corrected. We are $5 million short.

Chairman BYRD. Could you break that down and tell us what that is? If you could do that for the record, Mrs. Cheney.

Mrs. CHENEY. All right.

[The information follows:]

OMB request—fiscal year 1991

Appropriation/program	*Request*
Definite program appropriation:	
Education programs:	
Elementary and secondary education in the humanities	$8,800,000
Higher education in the humanities	8,600,000
NEH/Reader's Digest teacher-scholars [1]	1,000,000
History projects	350,000
Total	18,750,000
Fellowships and seminars:	
NEH fellowships:	
University teachers	3,195,000
College teachers and independent scholars	3,230,000
Summer stipends	800,000
Travel to collections	300,000
Younger scholars	400,000
Summer seminars:	
College teachers	3,850,000
School teachers	3,725,000
Total	15,500,000
General programs:	
Humanities projects in media	9,300,000
Humanities projects in museums and historical organizations	9,300,000
Public humanities projects	2,400,000
Humanities projects in libraries and archives	2,700,000
Total	23,700,000
Research programs:	
Texts:	
Editions	3,650,000
Translations	1,400,000
Publication subvention	350,000
Reference materials:	
Tools	3,375,000
Access	3,400,000
Interpretive research:	
Projects	2,800,000
Humanities, science and technology	900,000
Conferences	400,000
Centers for advanced study	925,000
International	2,150,000
Selected areas	50,000
Total	19,400,000
State programs	26,000,000
Office of Preservation	22,000,000
Indefinite funds:	
Challenge funds	15,200,000
Treasury funds	12,000,000
Total	27,200,000
Administrative funds	[2] 17,600,000
Total	170,150,000

[1] Federal funds only; does not include gift from Reader's Digest.

[2] Did not include the two pay raises projected for fiscal year 1991.

FUNDING RATIO IN FELLOWSHIPS DIVISION

Chairman **Byrd**. What is the experience with the grant applications for this program, the fellowships and seminars? In other words, what ratio is experienced in terms of applications submitted versus grants awarded?

Mrs. **Cheney**. In our fellowship programs, about one out of six, or one of out of seven applications is successful.

Chairman **Byrd**. Is it an acceptable tradeoff to fund fewer teachers?

Mrs. **Cheney**. We thought so. These are college and university professors, and we thought it was so important to raise the stipend that we were willing to make that sacrifice.

NEH/UCLA HISTORY CENTER

Chairman **Byrd**. The Endowment has provided support for the History Center at the University of California, Los Angeles. The History Center has been studying and collecting information on how history is taught and learned in the Nation's schools.

The center prepared a comprehensive report of the essential historical knowledge and understandings that students should acquire before graduation from high school.

Mrs. **Cheney**. This has not been published yet. It will be out in the fall and will be very important.

Chairman **Byrd**. I understand that the center is also preparing a comprehensive collection of exemplary materials to be used in the teaching of history. What is the total funding made available to date of the History Center?

Mrs. **Cheney**. One million dollars to date but within a matter of weeks they will receive an additional $500,000.

Chairman **Byrd**. What is the duration of the cooperative agreement, and when does it expire?

Mrs. **Cheney**. Their funding goes until March 1991.

Chairman **Byrd**. Are there additional projects that you would like to see accomplished by the History Center?

Mrs. **Cheney**. I think it is very important that the materials are gathered—wonderful materials for the teaching of history—and be disseminated. It often happens in education that we find ourselves reinventing the wheel, and teachers in one place have to come up with all the ideas that teachers in another place have already had.

These are wonderful materials that are being gathered that will help teachers across the country with the teaching of history if we can disseminate these materials.

SUPPORT FOR FOREIGN LANGUAGE INSTRUCTION

Chairman **Byrd**. The fiscal year 1991 budget proposes to begin an initiative, with $2.5 million in new funding, to assist efforts to strengthen foreign language instruction in our Nation's schools. Will the initiative be limited to postsecondary education, or will it include elementary and secondary education as well?

Mrs. **Cheney**. Elementary and secondary as well.

Chairman **Byrd**. What will you emphasize in this initiative, teacher education or curriculum development?

Mrs. CHENEY. Teacher education is primary.

Chairman BYRD. Do you propose to emphasize particular languages?

Mrs. CHENEY. We welcome all languages. There are some languages that are sometimes called less commonly taught languages, Russian and Japanese would be examples. We are particularly encouraging proposals in those areas. The number of students studying Russian, for example, has declined drastically over the last 25 years or so, and we think it is important that the Nation build the capacity to teach students languages like Russian and Japanese, and Arabic, and Chinese.

Chairman BYRD. I have a good many other questions, and I am going to submit these for the record, and if you could respond to them within the next 2 weeks; and along with the questions that are being submitted by the other Senators. We will conclude this part of our hearing this afternoon.

I certainly want to commend you for the work that you are doing, and for your enthusiasm, and your dedication that you have demonstrated, and we wish you well in your continued efforts. We want to be helpful. Thank you.

Mrs. CHENEY. Thank you, Senator. It is always a pleasure to appear before this subcommittee, and to appear before the chair of this committee, who is not only committed to students learning history, but a student of history himself. Thank you very much.

CLOSING REMARKS

Chairman BYRD. Well, thank you. Machiavelli, when he was in exile, and when he was writing poems, suggested that the French study history, and that the French emulate some great personage in history, as Alexander did Achilles, or as Caesar did Alexander the Great.

I believe very much in what Machiavelli said in that instance and with respect to that advice, I think we should all follow it. I have been to one movie in the 38 years I've been in Washington. [Laughter.]

And I didn't stay throughout that one. I became bored and walked out. I have been to one football game at half-time in those 32 years, and I went to crown the West Virginia University homecoming queen when West Virginia was playing Maryland.

I attended three baseball games while the Washington Senators were in Washington, and two of those were a doubleheader in one afternoon. [Laughter.]

You might say, well, what do you do, Senator, in your spare time. I study history. When you have seen one football game, you have seen them all. [Laughter.]

I tried a few years back during the holidays, Christmas and New Year's holidays, watching football games, and I liked it, but they are all alike. After I had spent a good many hours watching football games, I said to myself, well, what do you have to show for your time, and what have you learned.

So, I decided that I would not watch too many football games, although I am naturally very supportive of my own university's football team. I like to see them have winning seasons, but I don't spend much time with it. No football game ever changed the course of history, and no football game ever will change the course of history.

What kind of history do you like? Well, I especially like the history of England, and Shakespeare and Emerson, and I like to see good video movies, and "Matewan" is an excellent movie. Have you seen "Matewan?"

Mrs. **Cheney**. What is it?

Chairman **Byrd**. "Matewan." M-a-t-e-w-a-n. I recommend that you get that video. It is a movie of the period in West Virginia when the coal miners were trying to organize, and it was filmed in southern West Virginia, and it is really true to life.

The people who play the parts are absolutely perfect. I like Alistair Cooke, and "Six Wives of Henry the Eighth," and "Elizabeth R." The British have it all over us when it comes to acting. They are just perfect. They are just natural. It is a real joy to watch that kind of movie.

So, we can learn a lot from history. I try to encourage it to my grandchildren. To me education is a continuing thing. It is the best insurance against age. I like to try to learn just for the sake of learning, and I try to encourage young people to excel, and to study, and to excel in history, English, math, physics. I have a grandchild who graduates this year from the University of Virginia, and he is a physics major.

He is going on to get his masters and doctorate, and I have one who is a freshman this year at the University of Virginia, and he will major in physics, and I have one who graduated from Princeton 3 years ago and majored in English.

Now, these grandchildren are not quite like their grandpa. They do like to watch football games, and so on, but they have a little more time than I do. I admire the work that you are doing, and I have a feeling of utter helplessness, and almost hopelessness as I see what is going on in this country.

We need to emphasize scholastic excellence, and the athletes will take care of themselves. I was over in Petersburg, WV, during the recent break, and I stopped at a gas station, and I saw a man get out of a truck, and I said, well, look at that fellow. That is the biggest man I ever saw in my life, and so I followed him into the gas station.

And so I asked him, well, how tall are you, and he said, well, I am 6 feet 8 inches. And I said, well, how much do you weigh, and he said, I weigh 368 pounds, and he was the biggest man I had ever seen. He didn't have a shirt on. He had a tee-shirt on, and I have never seen such shoulders, muscles, and chest in all my life.

And so there is something about the athlete that excites a person. But with teachers, they do not get the recognition to which they are entitled. For the past few years I have been providing a bond, a savings bond, for valedictorians in West Virginia from public, private, and parochial schools. It started out as a $25 bond and it is a $50 bond now.

But about 4 years ago I initiated a program that is now national and provides a $1,500 scholarship to students who excel in their scholastic activities, and extracurricular activities don't count.

But I want to see students who are in libraries and in laboratories, and I want to see them get the scholarships, because if America is to continue to be a great Nation, and a leader among the nations, then it has to retain its technological advancement, and it is going to have to emphasize the need for education. I have become very discouraged when I read statistics, and I have a feeling of helplessness, and what can I do about it.

We can all talk about it, and we all here today have said the same thing, and that is: what can we do about it? America seems to be in decline in this area, and what we take out of the schools today will be out in the Nation in 25 years, and what we put into the schools is important and education should be emphasized.

One also said that you can judge the Nation by the kind of music that people like, and that to me is also a sad——

Senator McCLURE. Mr. Chairman, you might take some encouragement, as I recently on a trip to Russia had the opportunity to attend a modern music concert, and it was just as bad as it is here. [Laughter.]

Over amplified, and I could not stand it for very long, and I left before intermission. [Laughter.]

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. Well, we have all had our say today, and I want to thank you very much. There will be some additional questions which will be submitted for your response in the record.

Mrs. CHENEY. Well, Senator, really, I feel more encouraged now than I have in the last 3 or 4 years. We are now beginning to think about solutions that are radical enough to meet the problems we face, and so let me close on an upnote this afternoon.

Chairman BYRD. Thank you.

Mrs. CHENEY. Thank you.

[The following questions were not asked at the hearing, but were submitted to the National Endowment for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

GALLUP POLL

Question: In FY 1991, NEH is proposing a reduction of $222,000 in the "Higher Education in the Humanities" program, to a recommended level of $7,025,000. What will be the effect on your ability to offer assistance to schools looking to improve their humanities programs given the reduction proposed in your budget? How many fewer grants do you anticipate being able to award?

Answer: Actually there is no reduction here. The figures reflect the creation in FY 1991 of a separate funding category for foreign language education projects, which at present are supported with funds allocated to the Higher Education program as well as to the Elementary and Secondary Education program.

The number of grants awarded will also stay about the same.

Question: If you were going to do the survey again, would you proceed in a similar fashion, or would you consider other factors?

Answer: We would conduct the survey as we did the first time, although we might attempt to broaden the sample of colleges to enable us to compare results at institutions with varying types of course requirements (e.g., those with a core curriculum vs. those with loose distribution requirements).

Question: How do the results of this recent Gallup survey of college seniors compare with NEH's 1987 report entitled American Memory, which reported on the state of humanities education in the nation's public schools?

Answer: The news is disappointing in both cases. In fact, thirty-three of the 87 items on the 1989 Gallup questionnaire were taken verbatim from the 1986 NAEP survey. The original intention in the construction of these 33 items was that virtually all high school seventeen-year-olds should be able to answer the large majority of the questions. The results from the two assessments indicated that neither high school juniors nor college seniors possessed a comprehensive grasp of key figures, events, and documents in history and literature. Less than half of the high school juniors and college seniors, for instance, knew the purpose of The Federalist papers. Two thirds of each group couldn't identify the author of Native Son and Black Boy, and more than sixty percent of the high school and college test-takers couldn't name the author of The Return of the Native and The Mayor of Casterbridge. Overall, one half of the college seniors received failing grades (less than 60% correct) on these 33 questions. High school juniors did even worse on almost every question.

HUMANITIES AND HIGHER EDUCATION

Mrs. Cheney, in discussing the variety of humanities projects, the budget justification includes a narrative about mentor relationships (p. 18) between two-year colleges and peer institutions with successful humanities programs.

I am very interested in the prospects of this type of program, for I believe it has tremendous potential for many of our rural states wherein two-year institutions play not only a strong educational role, but also, a very strong community leadership role,

Question: What successes have you had to date with these types of mentor relationships? How many colleges and universities are participating?

Answer: In FY 1988 and FY 1989, the Endowment awarded grants totalling $505,391 to the American Association of Community and Junior Colleges to hold two national conferences, and to conduct extensive follow-up activities, for 25 two-year colleges and eight mentor institutions. We have been very pleased with the success of these programs. More than 10 percent of the nation's two-year colleges have applied to participate, and we have awarded several grants in support of humanities education projects at two-year colleges in response to project proposals that resulted from these conferences and mentoring activities.

Question: Is the initiative still in a pilot stage, or have you proceeded with full-scale implementation?

Answer: The project is in the implementation stage and will conclude in December of 1990.

Question: What changes have you seen recently in the number of applications submitted for NEH higher education grants by two-year colleges?

Answer: Two-year college applications are increasing steadily, and they continue to have the same success rate as applications submitted by four-year colleges and universities. In FY 1988, 10 percent of the applications to the Higher Education program were submitted by two-year colleges. In FY 1989 the proportion rose to 15 percent, and in FY 1990 it is 20 percent.

Question: What more can be done to encourage these types of associations? Does your administrative budget allow for development of relationships between your program staff and potential participants?

Answer: We will continue to encourage two-year colleges that have conducted a successful humanities project with NEH support to disseminate the results of their efforts to peer institutions. We will also continue to offer special encouragement to two-year colleges to apply for NEH support.

The administrative budget that we are requesting will be sufficient to permit NEH staff to continue to visit two-year colleges and meet with their faculty and administrators, in order both to keep abreast of developments at these institutions and to help them produce proposals to strengthen their humanities programs.

INSTITUTES FOR HUMANITIES TEACHERS

Question: In order to improve the quality of humanities teaching and education, NEH proposes (p. 4), in FY 1991, to fund an additional number of humanities institutes for history teachers. How many such institutes will be funded in FY 1990? How many additional institutes do you propose for FY 1991?

Answer: In FY 1990 and FY 1991, the Endowment will continue to encourage colleges, universities, and school systems to submit proposals for summer institutes for history teachers. Although the number of history-related institutes that are funded will depend on the quantity and quality of proposals in that disciplinary area, we anticipate funding approximately thirty-five institutes in all fields during each of the two fiscal years, of which considerably more than half will be of interest to history teachers.

Question: Will these institutes focus on particular periods of history?

Answer: No, any field of history that is taught in the schools is eligible for support.

Question: What is the average cost to conduct each institute? How many teachers attend, on average?

Answer: The average NEH grant for a teacher institute is $150,000. Typically, thirty teachers participate.

Question: The budget line-items which fund these institutes (the "education in the humanities" lines) are both proposed to decrease in FY 1991, for a total reduction in the "education in the humanities" lines of $444,000. How do you propose to fund additional institutes, as well as emphasize other initiatives, when the total funding proposed decreases? Are there other functions that will not receive funding in order to accommodate more institutes?

Answer: The budget we are proposing will provide $2.5 million for the types of foreign language education activities currently supported under the Elementary Education in the Humanities and Higher Education in the Humanities programs--a $2 million increase. Foreign language projects formerly supported in these programs will instead be supported in the new Foreign Language program line in FY 1991. Thus, the reduced line-items referred to by this question merely reflect separate support in FY 1991 of foreign language projects. Also, funding for projects in history and other fields are not being reduced in FY 1991.

RESEARCH PROGRAMS

The FY 1991 budget proposes an increase of approximately $1.8 million for additional work on original texts and reference materials.

Question: How many new books were produced as a result of NEH support in 1989?

Answer: About 240 books were published in 1989 that resulted from prior grants from the Division of Research Programs.

Question: What is your projection for FY 1990? How would this change in FY 1991 as a result of the increased funding you have requested?

Answer: We estimate that about 200 to 250 books again will be published. The increased funding for FY 1991 likely would result in more published books but not until the mid 1990s or so since there is a time lag between the awarding of the grants and the completion and publication of the grant products.

Question: Included in the projects receiving support in FY 1989 (p. 50) were volumes in the editions of the papers of several Presidents of the United States. Which were these?

Answer: The Endowment provided support for projects to produce editions of the papers of George Washington, James K. Polk, Andrew Johnson, U. S. Grant, and Dwight Eisenhower.

Question: How were these selected? Are there others that will be considered by NEH in this and future years?

Answer: Like other projects that receive funding from NEH, these grants resulted from unsolicited proposals that were recommended for support through the Endowment's peer review system. In the future, it is very probable that we will receive applications for projects to prepare editions of the papers and writings of other U.S. Presidents.

PRESERVATION ACTIVITIES

For FY 1991, you are requesting an increase (p. 74) of approximately $1.6 million for the Office of Preservation. These funds are proposed to continue the initiative begun in FY 1989 to microfilm brittle books.

Question: How many books have been microfilmed under this program since its inception in FY 1989?

Answer: The projects already funded under this initiative will microfilm over 300,000 books and serials by the time they are completed. This is a higher number of books than indicated in our FY 1991 budget request because additional grants have been awarded since the budget was prepared in January.

Question: What will the additional funds be used for? Are these for microfilming, or are there other activities that now need to be engaged in to protect these brittle books?

Answer: Much of the additional funding requested for FY 1991 to continue our multi-year preservation plan will be used to make grants for the microfilming of brittle books. However, some of the money will go into other allied preservation activities such as the education and training of preservation professionals, research and development of preservation techniques, and our ongoing U.S. Newspapers program.

Question: What is the estimate of total volumes of brittle materials to be microfilmed?

Answer: The Endowment's twenty-year preservation plan is directed toward microfilming about three million volumes. This is a figure that is generally agreed upon by preservation and library experts as being the corpus of significant volumes that should be preserved.

Question: What cooperative efforts have been undertaken with libraries and research organizations to improve their protection abilities?

Answer: The Endowment supports a number of projects that are helping libraries and research organizations improve their preservation capabilities. In FY 1989, for example, the Northeast Document Conservation Center in Andover, Massachusetts received an award to continue its regional field service program, which offers preservation surveys as well as workshops and seminars, disaster assistance, and technical and managerial consultations to institutions in New England, New York, and New Jersey. NEH has also supported the training of existing staff of humanities institutions through grants for preservation field services at other regional and national organizations such as the Southeastern Library Network in Atlanta, the Conservation Center for Art and Historic Artifacts in Philadelphia, the Society of American Archivists in Chicago, and the American Association of State and Local History in Nashville. The individual surveys and workshops offered by these organizations on various aspects of preservation practice reach many of the people who must make essential policy decisions affecting the treatment and storage of materials entrusted to their care.

Question: Are any of the funds used for education of professionals in the field of preservation? How have the recipients of these funds contributed to advances in our preservation abilities?

Answer: About $300,000 in FY 1989 funds from the Office of Preservation supported projects to educate and train professionals in the preservation field. The Endowment's chief support in this area is to Columbia University's School of Library Service, which operates the only comprehensive program in the United States that offers graduate instruction to preservation and conservation administrators. NEH funding helps library professionals attend the school to receive training in preservation techniques and administration. These individuals then return to their home institutions to deal with their preservation problems and needs.

GENERAL AUDIENCE PROGRAMMING

Question: As a highlight of your budget proposal, you indicate that during FY 1991, NEH proposes new efforts to expand general audience programming in the humanities (p. 1). Which new efforts do you envision? How would these differ from existing humanities outreach programs at NEH?

Answer: The Endowment supports educational humanities programs for the general public through its General Programs and State Programs divisions. In FY 1991, in addition to their regular program activities these divisions will undertake a number of special efforts to sustain and foster the growing public interest in the humanities that we described in Humanities in America.

In the Division of General Programs, the Humanities Projects in Media program will continue its recent emphasis on biographical documentaries by inviting filmmakers to create films for television on major figures in American history and letters. We hope to encourage more efforts like the fine films previously funded by the Endowment on Harry Hopkins, Thomas Hart Benton, and Booker T. Washington. The Humanities Projects in Museums and Historical Organizations program will support several seminars for museum professionals. To be held in museums, these seminars will enable museum curators and educators to study a specific topic under the guidance of subject-area specialists and then to develop related interpretive programs for the public at their home institution. The seminars are designed on the model of successful professional development programs for museum personnel that the Endowment has supported in the past and extend, on a more systematic basis, a category of support already available.

In FY 1991, the State Programs division will increase the number of State and Regional Exemplary Awards--special grants to the state councils for programs of exceptional merit that enable the councils to share resources and improve programming effectiveness. We will also, for the first time, make special $10,000 planning awards to each state council to support the development of a long-range programming plan. One of the aims of these awards is to increase each council's statewide visibility, thus enhancing its potential for stimulating additional third-party funding for worthy projects.

Question: What specific funds are indentified with these efforts?

Answer: Our budget request provides modest increases for both the General Programs and State Programs divisions that will support these efforts. For example, the allocation to the Museums and Historical Organizations program will be increased by $324,000 specifically to provide funds for several of the new museum institutes, and $530,000 will be awarded to the state councils for the special planning awards.

HUMANITIES PROJECTS IN LIBRARIES AND ARCHIVES

Under NEH's General Programs division, funds are provided for Humanities Projects in Libraries and Archives. Often, these grants allow for interaction of scholars and the general public for discussion and critical inquiry.

Your FY 1991 budget justification indicates (p. 45) that an increase of approximately 18 percent is projected in the number of applications received under this grant category, but that the number of grants actually awarded will likely remain constant.

Question: To what do you attribute the projected increase in applications? Is NEH working to solicit more applications?

Answer: As we noted in our 1988 report, Humanities in America, the growing popularity of reading and discussion programs is an important part of the "blossoming of the humanities" that is taking place across the nation. We are gratified that applications to the Endowment's Libraries and Archives program, which has been sponsoring reading and discussion programs for the general public for some time now, are increasing, and we expect they will continue to do so as more communities develop worthwhile programs of this sort.

Question: Why, if more applications are anticipated, do you propose a decrease of nearly 6 percent in the funding available for this category?

Answer: If, as anticipated, the Libraries and Archives program receives 100 applications and makes 25 grants in FY 1991, the funding ratio in this program will be just the Endowment average and will be comparable to those of the other NEH programs for the general public. We think that the amount we are requesting, which will provide virtually level funding for the Libraries and Archives program in FY 1991, is reasonable and responsible in light of competing requirements within the Endowment and throughout the government.

Question: What will be the average grant award for fiscal years 1989-1991 for this program?

Answer: The average grant will remain approximately the same in each year; that is, it will be somewhat more than $100,000.

ADMINISTRATIVE BUDGET

For FY 1991, the Humanities Endowment is requesting an increase of roughly $1.6 million for its administrative budget. Many of these costs are associated with noncontrollable items. Nonetheless, these costs are real and must be met.

Question: What impact have you experienced with your administrative budget as a result of recent changes to the grants process, such as increased review of subgrants?

Answer: We had estimated that the new grant procedures required by last year's appropriations bill would cost NEH about $100,000 and the equivalent of approximately one FTE. But implementing the legal requirements has been much more complicated than we had ever imagined, involving the agency from top to bottom. We don't have an estimate of the total impact on NEH, but it has been considerable and in excess of the money, personnel, and time originally estimated.

Question: Have your administrative costs increased as a result of additional scrutiny of the Endowment's programs?

Answer: Yes, as discussed in the previous answer.

Question: What costs are you experiencing in FY 1990 associated with increased Federal pay? What are your estimated costs for FY 1991? Are those costs reflected entirely in your budget?

Answer: In FY 1990, NEH must absorb the entire costs of the January 1990 pay raise of 3.6 percent--$300,000. In FY 1991, $500,000 is included in the budget for the two anticipated federal pay raises--3.5 percent for General Schedule employees and 22 percent for senior officials. There has been some talk, however, about a higher pay raise for General Schedule employees--4.1 percent rather than the 3.5 percent reflected in the budget. The higher raise would cost an additional $50,000 that is not in the FY 1991 budget.

Question: What is the impact on the panel review process when NEH is forced to absorb administrative cost increases?

Answer: Our FY 1990 budget included funds so that we could finally increase the per diem we pay to panelists from $75 to the authorized federal rate for Washington DC--$127. Because we had to absorb the pay raise and the reduction in our administrative budget as a result of the sequester, we will have to delay increasing the rate until FY 1991--assuming our full administrative budget request is enacted.

NEH'S FUTURE

Mrs. Cheney, this year marks the 25th anniversary of the original legislation establishing the National Endowment for the Arts and the Humanities. I will ask Mr. Frohnmayer similar questions with respect to his expertise at the Arts Endowment.

Question: How would you characterize the performance of the NEH over the last 25 years?

Answer: I think that NEH has fulfilled the promise and the mandate of the 1965 enabling legislation. As the federal agency charged with advancing education, research and scholarship, and public programming in the humanities throughout the nation, for a quarter-of-a-century we have strived to be a catalyst in helping Americans develop wisdom and vision by learning more about great works, ideas, and events. NEH has assisted school teachers who want to increase their knowledge of the humanities and to enrich their teaching; scholars and institutions who need funding for significant research projects; museums, historical organizations, public libraries, public television and radio stations, and state humanities councils that are trying to reach general audiences with mature, thoughtful humanities programming; individuals, organizations, and institutions that are working to build third-party support for their humanities activities; and the countless students and out-of-school citizens who, through contact with projects and programs funded by the Endowment, have been put in touch with the enduring concerns of human thought and experience.

Question: What activities or programs are planned to commemorate this anniversary?

Answer: We are in the process of planning an observance of the 25th anniversary of the Endowment centered around the broadcast this fall on PBS-TV of Ken Burns' major new 11-hour film documentary on the Civil War--a project that has received major funding from NEH. We think this film is a fine example of the significant projects NEH has supported over the years and will continue to support in the years ahead.

Question: What do you forsee for the Endowment's next 25 years?

Answer: I anticipate that over the next 25 years humanities education will still be the major focus of the Endowment. The pace of education reform is sometimes slow but in recent years we are really starting to see some important changes--for example, in the way future teachers are educated and certified. So, I would hope the Endowment would, as now, concentrate its efforts on helping to improve the quality of teaching and learning of the humanities in our nation's schools. By contributing to the laying of this important foundation for lifelong learning, the Endowment would continue to act on the 1965 enabling legislation's declaration that "democracy demands wisdom and vision in its citizens."

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

25th ANNIVERSARY

The year 1990 marks the 25th anniversary of the National Endowment for the Humanities. The enabling legislation declared that "democracy demands wisdom and vision in its citizens" and that "the study of the humanities requires constant dedication and devotion."

Question: During the four years you have been the Chair of the Endowment, how would you rate the NEH's performance?

Answer: I think the Endowment's performance has been exemplary over the last four years. We have worked hard to fulfill the mission and the vision first set forth in 1965 in our original authorizing legislation. To mention just a few examples: Two of our recent studies, American Memory and 50 Hours, have helped focus the nation's attention on some of the problems in the way the humanities are taught and learned in our schools and colleges. We established the NEH/Reader's Digest Teacher-Scholars program, the NEH/UCLA History Center, a program of Distinguished Teaching Professorship awards in our Challenge Grants program, and have proposed a new Foreign Language Education program for FY 1991 to help schools and teachers improve their instruction in the humanities disciplines. To advance scholarship in the humanities, in 1989 we put in motion a major long-term plan to preserve important books, serials, documents, and other materials that are vital to researchers in the humanities and will be used by future scholars for decades to come. And, with the publication of our 1988 report Humanities in America, we described and endorsed the extraordinary blossoming of public humanities projects and programs that has taken place across the country, and we have committed a significant part of our resources to efforts to meet the demand for these programs that constitute a virtual "parallel school" in the humanities.

Question: In a recent interview you were asked "what advice would you give an NEH Chairman of the 21st century?" You responded by stating: "It would be the same in the 21st century as in any other time: Preserve what is most worth preserving, change what is most in need of change, and leave to posterity all, and better than you inherited." How would you specifically fit our current state of the humanities into that analysis? In other words, what is worth preserving, what needs changing, and what are we leaving that is better than we inherited?

Answer: In some respects, the current state of the humanities is a healthy one. In the public sphere, the nation today is in the midst of a remarkable flourishing of interest in the humanities and significant projects and programs have grown to meet this demand. This is worth sustaining, and I would hope that the Endowment would continue to be the catalyst for many of these efforts in the decades to come as it has been over the last 25 years.

However, as I have said many times in recent years and as I restated at the Committee's hearing on June 6, the nation needs to do a much better job of teaching the humanities to our young people at all levels of our educational system. The key here is to give our teachers sufficient opportunities to know the subjects they are teaching, to reward them for being good teachers, and to give them a curriculum worth teaching. If we as a nation can commit ourselves to these tasks, I think we can leave to future citizens an educational environment that permits important learning to take place.

CHALLENGE GRANTS

In an effort to encourage colleges and universities to place greater stress on the teaching of undergraduates, the Endowment's Challenge Grants Program is currently sponsoring a special competition for higher education institutions that wish to establish faculty chairs for distinguished teachers of the humanities.

Question: Since the FY 1991 budget request does not propose new funding for this competition, how will the Challenge Grants program change?

Answer: Actually, the FY 1991 budget request for the Challenge Grants program represents an increase of about $650 thousand over FY 1990 funds, which will help to support some of the cost of this new program. This means that the "regular" Challenge program will be affected only marginally, by about one or two grants.

FOREIGN LANGUAGES

The report 50 Hours indicates that from 1982 to 1985 the number of high school students enrolled in foreign languages increased 38 percent. Since 1985, many states have implemented ambitious mandates for foreign language study in schools, and further increases in enrollment are expected.

To address this increased enrollment, the FY 1991 budget proposes an additional $2.5 million to help schools and colleges strengthen foreign language teaching (pg. 15 and 19).

Question: It appears that one of the goals of this program is to promote creative proposals. Is that accurate?

Answer: In addition to teacher institutes and curriculum development and faculty study projects to improve undergraduate courses, the Endowment's Foreign Language Education program will also support a variety of special projects to strengthen foreign language instruction. Schools, colleges, and universities are being asked to come to us with creative project ideas of their own devising. Such projects could include--but need not be limited to--planning for language magnet schools, collaborative arrangements among education institutions to provide for students' continuous and cumulative study of a language (early enrollment, development of coordinated curricular materials, formal admission and articulation agreements), and designing courses and curricula to improve the preparation of graduate students to teach introductory courses in a given language.

RESEARCH

You have requested an additional $1.8 million in the Research division to provide enhanced support to major multi-year projects in the Editions, Tools, and Access grant categories such as those involving the papers and writings of the U.S. Presidents (pg. 6 and 50).

Question: Can you elaborate on this proposal? On which Presidents will you focus your efforts?

Answer: The additional money will be used throughout the division but focused primarily in the Editions, Tools, and Access categories to relieve some of the funding pressure that has built up in these areas in recent years. Many of the projects supported in these three categories are of such enduring value and importance to the historical and intellectual life of the nation that the Endowment thinks it is paramount to commit more of its resources to this work.

As mentioned above in one of our answers to the "Additional Committee Questions," the Endowment is supporting projects to compile editions of the papers and writings of George Washington, James K. Polk, Andrew Johnson, U. S. Grant, and Dwight Eisenhower.

Question: Are there other multi-year projects proposed with this increase which will not include Presidents?

Answer: Yes. As you know, in addition to the Presidents, NEH supports such important editions as the works of Mark Twain and Frederick Douglass. Some of the increased funds being requested for the Research division in FY 1991 will be used to support these other significant, meritorious long-term editions as well as projects such as dictionaries, encyclopedias, and other reference materials supported through the Tools category.

FELLOWSHIPS AND SEMINARS

At the urging of the National Council on the Humanities, the Endowment will raise the amount of stipends in some of its programs in FY 1991 (from a maximum of $27,000 to a maximum of $30,000). This is being done to reflect increases in faculty salaries in recent years and to provide more adequate financial support for scholars and teachers in the humanities (pg. 22 and 24).

Question: Since the budget request does not propose an increase for FY 1991, how will this be accomplished? Will you reduce the number of stipends?

Answer: Yes, the number of awards will be reduced by about 20. It was a tough decision, but we think that it is preferable to provide grantees with a more adequate stipend.

Question: What is the average stipend for FY 1990 and the anticipated stipend for FY 1991?

Answer: In FY 1990, the maximum stipend for the two NEH fellowships programs is $27,500. In FY 1991, the maximum stipend for these programs will rise to $30,000. Average stipends usually run about $1,000 less.

NATIONAL CENTER FOR HISTORY IN THE SCHOOLS

Question: What are the goals of the Center, and what has been accomplished?

Answer: Six major goals were established for the Center at the outset. These goals and related accomplishments are summarized as follows:

The initial goal of the Center was to collect basic information about the current status of history instruction in the nation's schools. This is a necessary first step to lay the groundwork for the subsequent work of the Center. During the Center's first two years, a national survey of principals and history teachers has been drafted, pre-tested, and fielded. The survey is collecting first-ever data on the methods and materials of history instruction in the schools, and a report on the results is expected this fall. Concurrently, the Center has canvassed the social studies coordinators in each of the fifty states to determine the place of history in each state's social studies curriculum.

A second goal for the Center is to identify the essential historical understandings that should be the substance of history instruction in the schools. As a means of accomplishing this goal, a team of distinguished historians has been assembled to draft a statement on essential understandings in U.S. and world history. This statement is intended to assist teachers, administrators, and state-level policy-makers in designing their schools' history courses. Three of the volume's six chapters are now largely complete.

The third goal is to develop and evaluate improved programs and materials for teaching history in elementary and secondary schools. To this end, year-long institutes in U.S. and world history have been conducted, employing experienced teachers in the development of curriculum materials for classroom use. These materials have subsequently been tested in the classroom to ensure that they are suitable for national distribution.

Another goal for the Center--to disseminate exemplary programs for teaching history as well as policy recommendations for improving the teaching of history--is essential to the Center's mandate, as school administrators and history teachers can only benefit from the Center's work if they are made aware of its products and recommendations. As a first step in this effort, teachers, professors, and school officials across the country have been contacted as part of a project to assemble a comprehensive collection of curricular materials that have proven successful in the classroom. A fully annotated bibliography of these materials has been prepared and will soon be ready for dissemination. A Center newsletter is also being readied for national distribution this fall.

Two other goals for the Center will be addressed in the third year: (1) To assess the quality of teacher preparation programs for history teachers and propose steps for improving such programs; and (2) To analyze the market forces influencing the materials that are published for classroom use.

Question: Do you have plans to continue funding the Center beyond the planned 1991 time frame?

Answer: The cooperative agreement with UCLA is scheduled to conclude in March of 1991. In the agency's FY 1991 budget request, however, a "History Projects" line is proposed to provide continued assistance to those seeking to improve history instruction in the schools. We anticipate that the majority of funds for "History Projects" will be devoted to the systematic and comprehensive dissemination of history materials developed at the Center and elsewhere. Any interested group will be eligible to apply for this funding. Although the History Center is likely to apply, it would have to compete with other qualified applicants. The Center would receive no special treatment in the review process.

Question: Will UCLA continue the Center in some form with its own funds?

Answer: At this point we don't know whether or not the Center will continue after NEH funding stops. That decision will have to be made by UCLA and other groups who have an active interest in sustaining the Center's work.

Even if the Center ceases operations after three or four years, we believe that it will have made a major impact on the teaching of history in the nation's schools.

PRESERVATION

At the request of Congress, NEH has embarked on an accelerated effort to preserve the knowledge contained in brittle books and other deteriorating research materials. Your FY 1991 request for the Office of Preservation is $19,000,000, which is about $1.5 million greater than the FY 1990 appropriation.

Question: Is this requested increase a trend that we will continue to see in future Endowment budgets?

Answer: Yes, the multi-year preservation plan we submitted to Congress in 1989 contained a schedule of proposed funding increases in each of the first five years of the plan.

Question: The Library of Congress also is working on a program to save its aging books and other documents. What coordination efforts are you currently making with the Library, and are there any cost-saving measures that can be instituted by sharing resources or facilities with the Library for preservation activities?

Answer: The staffs of the Endowment and the Library of Congress are in frequent contact on a variety of preservation fronts. Chief among these is our joint effort on the U.S. Newspapers program.

Through an inter-agency agreement, NEH is responsible for grant making and grant administration of the newspapers projects and Library staff are responsible for quality control of the bibliographic entries the projects make in the national data base of newspaper titles.

The preservation efforts of the Library of Congress and NEH do have some different objectives, however. The Library, for example, concentrates on saving its own books and other materials. Preserving the actual physical book by a process known as deacidification is a major part of their preservation activity. The Endowment, on the other hand, makes grants to libraries, archives, and other institutions to microfilm books, serials, and documents that are important to current and future humanities scholarship. Our effort is focused on preserving the content of these materials, not the materials themselves. Thus, in terms of brittle books, our grantees do not make use of the Library's facilities or resources nor is there at this time a need to do so.

NATIONAL ENDOWMENT FOR THE ARTS

STATEMENT OF JOHN E. FROHNMAYER, CHAIRMAN

ACCOMPANIED BY:

CYNTHIA RAND, DEPUTY CHAIRMAN FOR MANAGEMENT
RON FINEMAN, DIRECTOR, BUDGET OFFICE
ANA STEELE, ACTING DEPUTY CHAIRMAN FOR PROGRAMS

BUDGET REQUEST

Chairman **Byrd**. This is the time that is scheduled to review the fiscal year 1991 budget request for the National Endowment for the Arts. Testifying is the Chairman of the Arts Endowment, Mr. John E. Frohnmayer. So, we are now going to give an opportunity for the press to take some pictures, after which we will get down to business.

Mr. Frohnmayer, as you know, you received some very nice comments from Senator Hatfield, and his statement will appear at this point in the record.

SENATOR HATFIELD'S INTRODUCTION OF JOHN FROHNMAYER

Senator **Hatfield**. Mr. Chairman, and my colleagues Senator McClure and Senator Stevens, I am very grateful for your indulgence and your gracious offer to me at this point, and Mrs. Cheney and her colleagues know that I am very supportive of the National Endowment for the Humanities.

I am also very supportive of the National Endowment for the Arts, and I would only like to make these few remarks because when John Frohnmayer was appointed by President Bush to head up the National Endowment for the Arts, he brought with him rare and extraordinary credentials to a very difficult assignment.

It has become increasingly difficult to maintain this country's commitment to the arts through the Endowment, while at the same time balancing that commitment with judgment. That is always an elusive objective in the field of arts and creative works, because one person's judgment may not be another person's judgment.

Nevertheless, John Frohnmayer was willing to undertake this rather difficult assignment, and I chose this occasion because, Mr. Chairman, as you know, this is his first appearance before the Subcommittee on Interior, of the Appropriations Committee of the Senate, to defend his budget, and to respond to the questions of this committee.

I just want the members of the committee to know that you are dealing with a man of great intellect, a man who is trained in the law and who is an artist himself, and a musician. He is a man who comes to this position with outstanding activity in the arts in the

State of Oregon, where he headed up programs in the arts in this time of diminishing budgets, while at the same time exceeding the expectations of those who were looking for statesmanship to help the development of the arts.

And he has these great credentials, but you know, Mr. Chairman, he is also a human being, and as a human being, as a part of the human race, this man, like any of us, needs encouragement once in a while, and I know that his wife encourages him, and his family encourages him, and his friends encourage him, and I am just here publicly today to encourage him. [Laughter.]

So that is just my simple mission.

Senator STEVENS. We call that the Hatfield hug. [Laughter.]

INTRODUCTION OF ASSOCIATES

Mr. FROHNMAYER. I appreciate that very much.

Chairman BYRD. Do you have some associates that you would like to introduce?

Mr. FROHNMAYER. I do have a number of them scattered around. Cynthia Rand, my Deputy Chairman for Management, and Ron Fineman, who directs the budget office of my agency, and Ana Steele, who is the Acting Deputy Chairman for Programs, and Rose DiNapoli, my congressional liaison, and Julie Davis, General Counsel; and Selena Ottum, who is the Deputy Chairman for Public Partnership. There are other employees around the room, all of whom are hardworking and worthy of mention.

Chairman BYRD. The fiscal year 1991 budget request for the National Endowment for the Arts is $175 million, an increase of $3,745,000 over the fiscal year 1990 level of $171,255,000. Of the proposed increase, $2 million is recommended for arts in education, and $1.5 million is associated with increased administrative costs experienced by the Endowment.

Mr. Frohnmayer, I invite you to summarize your statement, and your statement will be included in the record in its entirety, after which we will proceed with questions.

SUMMARY STATEMENT

Mr. FROHNMAYER. Thank you, Mr. Chairman. I will be very brief in the summary. I really will only talk about three things. I will talk about one grant, and the problems that we currently have, and I will talk about the solutions to those problems, and then I will welcome your questions.

The one grant that I want to talk to you about surprisingly enough comes from West Virginia, and that is to the Augusta Heritage Center at the Davis and Elkins College, in Elkins, WV.

This is a grant for a yearlong series honoring traditional Appalachian artists, including many of whom have never been presented to the public before. There will be over 70 of these traditional artists performing workshops, and master classes, and predominantly for rural folks in that area.

But it will be preserved because it will be recorded, and they are hopeful that it can also be videotaped so that this kind of artistry that is possessed by the people in that region can be preserved and indeed shared around the rest of the country.

One of the things that a program like this does is that it has a tremendous effect on the self-image of these artists, many of whom don't appreciate how special they really are. I mean, their neighbors have known them for years, and they are part of the fixtures of the community, and yet they possess a tremendous amount of America which I believe, and the Arts Endowment believes, is worthy of preservation.

And so they will give these performances, and they will be in residence from 1 day to 1 week, interacting with the community in a variety of ways, from going to senior centers, to giving performances.

And over that period of time, what is hoped is that not only will they be able to demonstrate their art, but they will be able to help pass that art on down to new generations so it can be not only preserved, but also appreciated and enhanced.

And in the application for this particular grant, Davis and Elkins College said that the financial support for this program will help keep alive public awareness of cultural issues in West Virginia, to help ensure the continuation of the traditional arts within our mountain communities is indeed preserved.

Some of these people I am sure you know, Senator: Walter Miller, Joe Fulaytar, Sarah Singleton, and people who are fiddlers and cymbalom players, and Melvin Wine and Woody Simmons, Nat Reese, Ethel Caffie-Austin, the gospel singer, and so forth.

I would suggest to you, Senator, that this is indeed the sort of thing that the Arts Endowment ought to be doing and I am very proud of this particular project, and I would like if it is all right with you to submit for the record the application of "Appalachian Treasures: Master Folk Artists—in West Virginia."

Chairman BYRD. Without objection, it will be included in the record.

[The information follows:]

"APPALACHIAN TREASURES: MASTER FOLK ARTISTS IN WEST VIRGINIA"

The Augusta Heritage Center of Davis & Elkins College is requesting funds to support our presentation of a year-long series honoring traditional Appalachian artists, including many who have never before been presented in public. The series of public performances, workshops and master classes by nearly 70 traditional Appalachian artists will take place from the spring of 1990 through winter of 1991, and is aimed at a regional audience, predominantly rural. Funds requested will be used to assist in paying the artists' fees, with matching funds and costs of publicity and other overhead being raised through admissions and workshop fees, as well as support by the state of West Virginia.

This project will take place throughout the year, in Elkins, West Virginia, as well as several other rural communities. This is a major departure from other Augusta Heritage projects supported by NEA in the past, all of which took place during the summer and were attended by a broader based audience. Through the "Appalachian Treasures" program, we hope to build local awareness and appreciation for the cultural traditions found in our region. The series will celebrate and honor the artists who exemplify these traditions, many of them unknown within, as well as outside, their own community.

Essential to the success of this project is our ongoing field research and documentation of folk artists. This has brought us in contact with artists never before presented by Augusta Heritage Center, and some who have never performed or exhibited their work in public before. Our commitment to documenting folk artists will be evidenced by our plans for taping, photographing, and/or videotaping all of these presentations.

Even though ours is a region steeped in traditional arts and folk culture, there is very little awareness of these locally. Traditional crafts are perhaps the most visible of the folk arts, but they are not valued as highly here as they are in urban areas. Traditional dancing is difficult to find, and local dances are often not advertised publicly.

Traditional music is quite undervalued and is generally ignored by the media and the school system. In our planning for the "Appalachian Treasures" series, we have been exploring the possibility of broadcasting some of the presentations on local radio. We have also been working with West Virginia public television producer John Nakashima on a possible series of broadcasts of Augusta concerts, and this is likely to include performances and interviews of some of the artists in this series.

There are numerous possibilities to be explored so that the artists presented can reach the widest possible audience and receive the most recognition. We feel that the publicity generated by the series, and the impact of a responsive audience on the artist's sensibilities, will help to nurture the artists' self-image and standing in their local communities. The series is seen by us as a step toward strengthening connections between residents of this region and their cultural forebears.

Several of the artists who have been recipients of the Augusta Center's state-wide Folk Arts Apprenticeship grants will be among those presented, along with their apprentices. Others who have not worked with an apprentice will be invited to bring along a protege.

Several members of the staff of the Augusta Center will be responsible for the successful execution of "Appalachian Treasures." Folklorist Gerry Milnes, coordinator of Augusta's Apprenticeship program will be largely responsible for identifying and contacting the artists. Direct responsibility for programming and presentation of the artists will fall to Margo Blevin, who will be assisted by a staff facilitator who will oversee the program. The facilitator will arrange such details as lodging, meals and travel arrangements for the artists, and will provide hospitality and assistance for the artists.

The artists selected will be in residence for one day to one week, interacting with the community in a variety of ways, from visits with Senior Citizen groups to concert performances. Life interviews with each will be taped by the Augusta staff during the visit, to be added to the growing archives of the Center. Each of the folk artists will be presented in a manner appropriate to their art. Some, such as quilters Mary and Wilda Beery, will spend a week in residence, teaching a group of eight to ten quilters, and passing on their skills and experience. Members of the local community who are unable to take the time to attend these workshops will be given opportunities to visit the workshops to observe and take part in the learning process.

Most of the Appalachian folk artists have been scheduled for a single day or half day presentation. Responsibilities of the artists will be varied; the following section lists each folk artist and describes what each will be doing. Some musicians will be asked to perform in concert, but the majority will be featured in a format which has proved very successful here at Augusta, particularly for artists who have not often performed in public, or whose value is as a culture-bearer and exemplary primary source rather than as a polished performer.

For these artists, we prefer to offer special public sessions which we call "A Visit With...(name of artist)." These are publicly conducted interviews in an informal setting, and we encourage a great deal of give-and-take with the audience. The interviews are to be conducted by Gerry Milnes and other folklorists, and many of the artists will want us to back-up musicians or to host one of their choosing. Sound amplification will be avoided wherever possible, and we will record these presentations in as unobtrusive a manner as possible. Experienced staff people and volunteers will be involved in recording all interviews for the archives. These programs are usually offered to the public free, and have been extremely popular with our local community, which has been increasingly supportive of Augusta and its ongoing master folk artists programs.

In 1986, we began the policy of offering scholarships for the workshops, and lodging and meals to proteges of the master folk artists, selected and brought from their communities by the folk artists themselves. These "apprentices" have been bringing their own talents and vigour to our programs, and most of all, have drawn inspiration from our recognition of their special relationships with the master artists. This has helped to generate hope for the continuation of these art forms in their place of origin. Most of those who have been brought in as "proteges" from the artists' communities have continued and strengthened their relationship with their master artist.

In this, our eighteenth year as a folk arts presenter, we will be evaluating the cultural contribution our programs have made to our rural region. This public celebration of the artistic expressions of our region will help to build a positive vision of the region, the diversity of its people, and their enduring values.

Financial support for this program will help to keep alive public awareness of cultural issues in West Virginia, an area which has not had a great deal of assistance for arts programs. It will help to ensure the continuation of the traditional arts within our mountain communities. We urge the Endowment to support this project.

"APPALACHIAN TREASURES"

The following folk artists will be presented as guest artists and performers. All artists to be included are briefly listed here in the order in which they will appear, and are described in greater detail in the next section, where they are listed in alphabetical order. Each presentation will take place in Elkins, West Virginia on the campus of Davis & Elkins College, unless otherwise noted.

April 24 through 29, 1990: Spring Dulcimer Week.

This week of public presentations, workshops, concerts, slide shows and other activities centers on the mountain dulcimer and hammered dulcimer. The workshops will be open to a limited audience of dulcimer players and those learning to play; there will be a fee charged for these, as well as for the public concerts. The workshops will be held in various classroom spaces and will be open to about 30 people; the concerts will be held in historic 100-year old Halliehurst Hall, capacity 150. Concert attendance should be as high as 100, of whom more than half will be local residents.

The other public presentations, such as the well-publicized "visits" with the master folk artists are free, and should attract about 75 to 100 people at each program. These interviews will be conducted by Gerry Milnes, unless otherwise indicated.

WALTER MILLER - Fretted dulcimer builder and player, Nicholas County, W.V. Workshop on Wednesday AM, April 26, concert at the Randolph County Senior Center at noon, and free public program, "A Visit With Walter Miller" on Wednesday afternoon.

CARL DAVIS - Fretted dulcimer player and dance caller, Braxton County, W.V. Workshop on Thursday, April 27; playing and calling for a public square dance on Thursday night.

JOE FULAYTAR - Cimbalom player, Fairmont, W.V. Will conduct a workshop on traditional Hungarian cimbalom music for a group of hammered dulcimer players on Tuesday afternoon, April 25. Players participating will pay a fee; general audience is invited to attend and listen without charge.

SARAH SINGLETON - Fiddler, Braxton County, W.V. Sarah plays both fiddle and dulcimer; she will demonstrate both in a public "visit" on Thursday, April 27. She, Carl Davis, and other members of their square dance band will play on Thursday night for a traditional dance, Braxton County style. Also attending the dance will be a group of Braxton County dancers.

RAY EPLER - Dulcimer builder, Charleston, W.V. Will conduct workshops for beginner dulcimer players, and will exhibit his instruments in Halliehurst Hall during the Spring Dulcimer Festival, Sat., April 29.

May 4 & 5 - "Melvin Wine Days" -

A celebration of the traditional music of central West Virginia, centering on fiddler Melvin Wine. This weekend of music and dancing will occur soon after Melvin's 81'st birthday, and will include workshops all day Saturday, a dance on Friday night, and a concert on Saturday night. The workshops will be open to all who preregister, regardless of level of ability, and scholarships will be available for those who are willing to help out with meals. Hands-on workshops will be offered in fiddle, singing, guitar, and banjo.

The locale will be an old church in Sutton, WV, which has been converted privately by local residents into an arts center and performance space. Sutton is located in the south-central part of the state, at the junction of two major roads, and is centrally located for a good-size portion of the traditional music audience in the state. Any funds raised in excess of expenses will be used for the Folk Arts Apprenticeship program.

The artists to be included in concert and in workshops are:

MELVIN WINE, fiddler; JIM COSTA, fiddler, banjo player, storyteller; GINNY HAWKER and KAY JUSTICE, traditional singers; RON MULLENEX, banjo player (see descriptions of all elsewhere).

July 8 through August 12, 1990: Augusta Heritage Arts Workshops -

The Master Folk Artists series is at the core of the educational experience at the Heritage Arts Workshops. At least three public presentations per week will be offered, many of them free to the local community. These are varied in format, and similar to those taking place in April, described earlier.

In addition to the presentations and performances by guest master folk artists, an important component to the Workshops is the inclusion of a good number of traditional Appalachian master artists as instructors of week-long to two week-long classes. These provide an invaluable opportunity for those who wish a more extensive exposure to a particular art form. Many of the folk artists we are including have become highly skilled at teaching their art form to small groups as a result of these workshops.

During the five-week summer session, on dates still to be determined, we would like to present the following Appalachian folk artists:

WEEK 1, JULY 8 THROUGH 14, 1990

WOODY SIMMONS - Fiddler, Mill Creek, WV - Two separate days in residence as guest musician; will demonstrate his style of Old-Time fiddle and banjo playing, both in one public afternoon "Visit" and in session with fiddle and banjo students. Designated scholarship recipient is John Gallagher, a carpenter from Valley Head, WV.

WAYNE HENDERSON - Instrument builder, Mouth of Wilson, VA - In residence for two weeks; he will conduct an intensive workshop in guitar construction for three students.

JOHN JACKSON - Guitar player, singer, Fairfax Station, VA - In residence for one week; will conduct daily workshops on Piedmont style and ragtime guitar, perform in concert, and participate in one afternoon session, "A Visit With John Jackson".

NAT REESE - Singer, guitar player, Princeton, WV - In residence for one week; he will conduct a master class on his blues guitar and vocal style. Nat will be accompanied by his protege, harmonica player Bob McGraw, from Bluefield, WV, who will perform with him in concert.

JOHN CEPHAS - Blues guitar player and singer, Woodford, Virginia - In residence for one week; will conduct daily workshops in finger-style and slide guitar, perform in concert, and participate in one session, "A Visit With John Cephas." Designated scholarship recipient is Mike Roach, a young blues musician from Washington, D.C. who has been studying with Cephas since meeting him at Augusta three years ago.

ETTA BAKER - Blues guitar player, Morganton, TN - Will be in residence for a week teaching blues and ragtime finger-style guitar, and will perform in an evening concert.

ETHEL CAFFIE-AUSTIN - Black Gospel singer, Charleston, WV. In residence for one week, teaching gospel singing and gospel piano styles. She will be teaching primarily in the evenings, and from 50 to 60 local residents are expected to enroll in this class.

WEEK 2, JULY 15 TO 21

BOB KESSINGER - Mandolin player, Harmony, WV - One-day visit including a session with "Old-time Week" mandolin students, open to the public, and a concert performance with his sons, Robin and Dan Kessinger.

ROBIN KESSINGER - Guitar player, Mason, WV - In residence for one week, conducting daily workshops in flat-picking. He will participate in a public session on musical families of West Virginia, and perform in concert.

DAN KESSINGER - Fiddler and guitar flat-picker; see above.

BILL CROUSE - Native American singer, dancer, Salamanca, NY - In residence for one week; will coordinate a week of activities including 2 public performances and workshops on Seneca culture and traditions, songs and dances, religion, crafts, musical instruments, and herbal remedies. Participating with him in all of these activities will be his great-grandfather, RICHARD JOHNNY-JOHN, his uncle, KEVIN JOHNNY-JOHN, and his cousin, STEVE GREEN. We hope to be able to offer full scholarships to six young people from their reservation, and an equal number of West Virginians of Native American descent.

(Please note: at this writing, these listings are tentative. We are also exploring the possibility of presenting a week of Cherokee traditional artists from North Carolina as an alternative plan).

ARTHUR D. JOHNSON - Eighty-three year-old Banjo and guitar player and singer, Mill Creek, W.V. To be presented in an afternoon "visit" open to the public.

DAVE BING, MIKE BING & TIM BING - Fiddler, mandolin player and banjo player, originally from Harmony, WV - In residence for one week, conducting daily instrumental workshops on West Virginia fiddle tunes. The Bings are three brothers who play old-time music that has come down through their family. The brothers were strongly influenced by older local musicians, such as the Hammonses and the Carpenters. All three have been recognized as major proponents of the old-time styles of their region. They will also perform in concert.

CLYDE DAVENPORT - Fiddler, from Monticello, KY, Clyde's music has been recognized as an outstanding example of solo style fiddling. His huge repertoire includes pieces learned directly from Burnett and Rutherford, early twentieth century musicians from Monticello who toured the south.

FRANK GEORGE - Fiddler and banjo player, Spencer, W.V. In residence for a week, teaching workhops on both instruments, plus demonstrating the Scottish and Irish repertoire which has survived in his family.

ERNIE CARPENTER - Fiddler, Braxton County, W.V. Descended from the first settler in Braxton County, Ernie's repetoire and family oral history accounts take listeners back to the pioneer days.

CLYDE CASE - Basket maker, traditional singer and banjo player, from Duck, W.V. Will be in residence for two days, conducting workshops and demonstrations on all three art forms.

PHYLLIS MARKS - Unaccompanied ballad singer from Glenville, W.V. She will be presented in a public "visit", accompanied by her granddaughter, Crystal Law.

MARY & WILDA BEERY - Mennonite quilters, from Harrisonburg, VA. They will jointly conduct a week-long class in the making of traditional pieced quilts.

SNAKE CHAPMAN - Fiddler from Canada, KY. Snake's interesting family tunes and their associated lore from Eastern Kentucky present a context and body of music that is exhilarating.

JOHN CHRISTIAN - Storyteller and banjo player. John spellbinds his listeners with an octagenarian's reminisces of life in the rugged Yew Pine Mountains of Central WV. His clawhammer banjo playing seems a natural artistic expression of that life.

WEEK 3, July 22 to 28

DAYTON HOWES - Fiddle maker, Buckhannon, W.V. Will conduct a week long workshop on fiddle and bow repairing. He will be accompanied through the week by his apprentice, Charlotte Cobos, and for one day by his father, Clyde Howes.

CLYDE HOWES - Buckhannon, W.V. Father of Dayton Howes; Clyde is a self-taught instrument builder who has been making fiddles all his life.

MARION HARLESS - Herbalist, from Kerens, W.V. Will conduct a week-long workshop on local herbs and their lore and uses.

RUSSELL HIGGINS - Randolph County, WV. Russell accompanies his banjo playing with a lonesome singing style, he is a flatfoot dancer, and tells some great traditional yarns he remembers being told in his youth.

WEEK 4, JULY 30 TO AUGUST 4

ANDY BOARMAN - Autoharp and banjo player/maker. Andy is the subject of a new film, REMEMBERING YESTERDAY. As a craftsman, Andy is innovative and a perfectionist. He is one of the very few people who plays banjo in the old classical style.

O.L. "TUBBY" FITZRANDOLPH - Folk carver/ whittler, from Point Pleasant, W.V. Will conduct a week-long workshop for up to 10 people, plus an exhibition and demonstration for the public.

OLIVE GOODWIN - Weaver, Valley Bend, WV. In her 80's, Goodwin will co-teach a two-week workshop in traditional weaving, emphasizing pattern drafting and overshot patterns. She will be accompanied and assisted by her protege and former apprentice, Donna Morgan, from Helvetia, W.V.

JUNIOR LLOYD - Dulcimer player and traditional flatfoot dancer, from Napier, WV. Junior made his first dulcimer in the forties and has been playing since childhood. He is one of the best-known traditional dancers in Braxton County, and will demonstrate both his playing and his clogging during a public presentation.

JANE GEORGE - Jane along with her husband Frank (see above) will be presented in a public "visit" during which she'll demonstrate the traditional Scottish Country Dancing which has survived in her family.

WEEK 5, AUGUST 5 TO 12

ED CABELL - Singer of unaccompanied blues and spirituals, from Morgantown, W.V. One day residency, during which he will be presented as guest artist during workshops on southern singing styles and black music.

KEN MCGAHA - Blacksmith, Heaters, W.V. One-week residency during which he will teach basic blacksmithing techniques and also conduct an exhibition and demonstration of his work for the public.

HOMER SAMPSON - Unaccompanied ballad and shape note singer, from Schock, W.V. Will visit for two days as guest artist, and perform in concert.

HARVEY SAMPSON - Nicut, WV. Harvey has carried forth the fiddling tradition and repetoire of his father and is an excellant representative of older central West Virginia solo fiddling.

ETHEL CAFFIE-AUSTIN - Gospel singer and choir director, from Charleston, WV. In residence for one week, teaching group singing, and black religious music of West Virginia, and will also perform in concert.

BEN HAWKER - Primitive Baptist singer from Exmore, Virginia. Guest artist for three days; will conduct singing workshops, be presented in a public "visit" and perform in concert.

GINNY HAWKER - Ballad and Primitive Baptist singer from Glenville, W.V. Will conduct a week of workshops on southern singing styles and repertoire, and will perform in public with singing partner KAY JUSTICE, a native of English, W.V. now living in Abingdon, Va., as well as with her father, Ben.

BILL COOK - White oak basket maker, from Mt. Jackson, Va.; will conduct a week-long workshop on white oak egg baskets, as well as a public exhibition and demonstration.

THE GRIFFIN FAMILY BAND - Flatwoods, WV. Richard and Irma, with their son Buddy, play and sing very traditional sounding bluegrass music on fiddle, banjo, guitar, and bass. Richard's father sang and played old time music on the dulcimer as well as other stringed instruments.

REV. RITA EMERSON - Singer of traditional songs and hymns in her 80's, from Glenville, W.V. Will be guest artist for one day, conducting singing workshops.

EVERETT WHITE - Enterprise, WV. Everett will present a program of ballads and songs learned from his mother and grandfather. His extroidinary repertoire includes broadsides, Child ballads, humorous ditties, and topical songs.

DAVE MORGAN - Jug band player in his 70's, from Ellamore, W.V. Will be presented in public "visit" and will also conduct workshops on wash tub and other jug band instruments; will also exhibit and demonstrate folk toys he makes.

HAZEL STOVER - Clay,WV. Hazel is a Primitive Baptist who sings in the unaccompanied style of her faith as well as secular songs learned from her family. Her high clear voice and gentle personality will likely captivate those who attend a visit with her in a one day residency.

GLEN SMITH - Elizabeth, WV. A fiddler whose driving style is perfect for dancing, Glen's intricate bow work presents a challange to younger fiddlers eager to learn his tunes. During his residency at old-time week, Smith will demonstrate both repertoire and technique.

MABEL MARTIN - From Chilhowie, Va., Mabel is the matriarch of a familly of traditional singers. She, and hopefully also several of her daughters, will talk about the singing in her family and community, and will demonstrate during a public "visit," as well as perform in concert.

RON MULLENNEX - A son of the mountains of Randolph County, WV, Ron's banjo and singing style evokes memories of the mountain folks who taught him his music. He will be in residence for a week teaching banjo, ballads, and songs to fiddle tunes.

BOYD PHILLIPS - Fiddler, Dailey, WV. Boyd has strong family ties to traditional fiddling and has expanded his repertoire to include numerous regional tunes.

DICK STUTLER - From Elkins, W.V., Dick grew up in a musical family, and plays several instruments. He will accompany Boyd Phillips on guitar and banjo.

October 8 through 14, 1990: Fall Fiddle Week.

This week of public presentations, workshops, concerts, slide shows and other activities centers on the traditional fiddle tunes of West Virginia. The workshops will be open to fiddle players of all levels, as well as banjo and guitar players, and those learning to play; there will be a fee charged as well as for the public concerts.

The workshops will be held in various classroom spaces on the campus of Davis & Elkins College, and will be open to about 30 people; out-of-town participants will stay in local homes or in nearby motels. A concert and other evening events will take place in Halliehurst Hall. Concert attendance should be about 100 to 150.

The public "visits" with the master folk artists are free, and should attract about 75 people at each program. These interviews will be conducted by Gerry Milnes.

WOODY SIMMONS -Fiddler, Mill Creek, WV. Woody's 70 years of fiddling experience will be showcased during this visit and mini-concert. He will also be utilized as a dance fiddler during his stay.

BOYD PHILLIPS - (see above) Boyd will be a featured guest and concert performer.

WILSON DOUGLAS - Fiddler, Clendenen, WV. Wilson will do a presentation concerning the music of Clay County, WV as he learned it from the fiddling of French Carpenter, Lee Triplett, Doc White and others.

MELVIN WINE - Fiddler, Copen, W.V. In residence for three days as guest artist; will be presented in a public "visit" and in concert. Accompanying him will be his apprentice, John Gallagher, from Valley Bend, W.V.

RON MULLENNEX - Will conduct a week-long workshop for intermediate-to-advanced level banjo players.(see above)

November 18 to 23: Thanksgiving Festival - A week of workshops and public presentations on the theme of the history and folk culture of West Virginia. This will take place in Davis, Tucker County, W.V. Out-of-town participants will stay at Canaan Valley State Park, and all workshops and concerts will take place in the main lodge of the State Park. The following folk artists will be included:

JIM COSTA - Storyteller, Historian, from Hinton, WV. Jim is well versed in the traditions and music of his native Summers County and the region. He will be involved with workshops, discussions, and will be presented in concert during the week.

CLETA LONG - Folk Poet, Tucker County, WV. Cleta will be presented in a public "visit" during which she will read some of her poetry.

DOROTHY THOMPSON - Weaver, spinner, basket maker from Tucker County, W.V. She will be visiting artist for one day, exhibiting and talking about her work. This will be a free public presentation.

ARTISTS IN SCHOOL PROGRAM

Mr. **Frohnmayer.** We have a dilemma, Senator, and I want you to know, Senators, that I am aware of it. Almost everyone realizes that the Endowment has contributed to this country in very significant ways, and just a few examples are our Artists in Schools Program, which reaches 4½ million children each year, and sometimes this is the only arts experience that they get in their education.

Folk arts are now appreciated on a level, on a par, with the classical arts, and I think to a large degree because of the folk art coordinators that the Arts Endowment has put into the States over the years that it has been in existence.

The identification of folk arts as a legitimate piece of Americana needs to be preserved. Our symphonies, our dance companies, and our museums have increased by the hundreds, and if only one of those things happened, then we might say that is serendipitous.

But when every one of those groups has increased by hundreds of significant companies over the last 25 years, I think it is fair to say that the Arts Endowment has had a hand in that, and has helped make that happen.

And with that, the audiences have increased substantially, and, indeed, we are now a country that can enjoy dance in every part of this country, instead of just in New York City, as it was in 1965, and the same is true with symphony, opera, theater, and all of the other art forms.

And the Arts Endowment has helped to fund local arts agencies in almost every area of this country. We started in 1965 with about 162 of them, and now there are over 3,000. We haven't had a hand in each one of those, but we certainly have had a hand in helping establish that network of local arts agencies, and developed access for most of the arts to places like Salmon, ID, for example.

So, those are some of the successes. But the dilemma is that, on the basis of maybe 20 images out of 1 million that we have funded over this last 25 years, the Arts Endowment has been attacked and indeed our very existence is in question.

And I want you to know that I appreciate this problem, that it has caused a problem for you here in Congress, and that, although those grants for which we are being criticized did not happen while I was Chairman, it is my responsibility to take care of the problem and help offer you solutions.

And I want you to know that we are making every effort to do that. Moreover, I would say to you that none of us need this problem, and the arts should be a glory to Congress, of which each of you can be proud, and to go back to your constituency and say, well, what we have done for you is what you already know, because you have been involved, and that is the arts in your community.

And I want to make this Arts Endowment a part of the fabric of this society so that it is so thoroughly appreciated by the American people and by you in Congress that we never again will have to go through the kind of agony that this agency has gone through in the last 410 days.

I have submitted my testimony, and I will not recount it, but I do want to tell you, in terms of a solution, that when I testified before the authorizing committees, I identified 14 ways in which we are tightening up the grants-giving process in this agency, and I would like, rather than to recount that for you point by point now, to enter into the record that part of my testimony given on March 21, 1990, before the House Education and Labor Committee.

Chairman BYRD. All right. Without objection, this will be included in the record.

[The statement follows:]

STATEMENT OF JOHN E. FROHMAYER BEFORE HOUSE SUBCOMMITTEE ON POSTSECONDARY EDUCATION

Mr. Chairman and Members of the Committee:

At the hearing on March 5, 1990, I addressed how the National Endowment for the Arts has fulfilled its mandate to promote creativity in our society. I commented that the Endowment's success has been in its process, namely, the panel process which brings over 800 citizens to Washington each year to do the government's business. These citizens, who are expert in a particular area of the arts, recommend the applications which are most competitive -- which represent real quality and merit.

Because so much public discourse, debate, and concern has arisen over "obscene or indecent images," and because the charge has come, from some quarters, that the Arts Endowment is not responsible for the grants we make, I direct my remarks today to two topics:

I. How the Endowment is responsible for the grants it funds.

II. The specific changes we propose.

I. Responsible Procedures

I start with the proposition that Congress does not want to micromanage the Arts Endowment, but does want to assure that taxpayers' money is responsibly spent. Our mission statement says, in part:

> "We must exercise care to preserve and improve the environment in which the arts have flourished. We must not, under any circumstances, impose a single aesthetic standard or attempt to direct artistic content."

While the panel system is sometimes inefficient, slow and cumbersome, it is also akin to the American jury system which, over 800 years of English and American jurisprudence, has proved to be the most effective way of reaching true consensus. But we can improve the process to make it more responsible, more responsive, and more visible to the American people. To that end:

1. We have developed a grid which shows where each panelist comes from geographically. By so doing, we attempt to achieve wide geographic distribution and have at least one panelist from each region of the country who will know the work of many of the applicants from that region.

2. We have developed a grid to assure that as many cultures as possible are represented on each panel.

3. To the extent possible, we attempt to mix the panels with individuals of varying experience (and to the extent possible, viewpoint).

4. On each panel, we attempt to have some representation of educated lay persons, that is, those who have expertise in the particular discipline, but don't necessarily make their living at it. These persons are a small minority on every panel, but they do bring a point of view which is useful.

5. We have opened the deliberations of policy panels in all disciplines to the public.

6. We use site visitors in some categories to assist the panelists with more in-depth reviews of the applicants.

7. I, as Chairman, personally attend each panel (over 120 panels meet each year), or if I am out of town or unavailable, one of the senior members of my staff attends

to explain the most current legislation and discuss the responsibilities of panel persons. Not only are these discussions useful to the panelists, but they often provide insights as to how the process can be improved.

8. We are assuring that a careful record is made of all panel deliberations:

i. The meetings are recorded and staff are directed to keep careful notes.

ii. On each recommendation, the panel records its findings as to various criteria outlined in the published guidelines, such as artistic significance, administrative abilities, significance to the field and such other attributes or deficiencies, prior to voting yes or no or assigning a monetary recommendation to the application.

iii. As for applications which might be controversial, but which the panelists find have artistic merit and which they vote to recommend, I request that a careful record be made by which they justify the artistic grounds upon which the recommendation is forwarded.

9. The National Council on the Arts members (the 26 Presidential appointees) are encouraged to observe as many panels meetings as their schedules allow. The Council's comments and suggestions are fed back into the system, so that the panels are continually improving policies and programs.

10. All grant notification letters for FY 1990 state up front the requirement that all grantees adhere to the appropriations language (prohibiting obscenity) passed by Congress with our FY 1990 appropriation.

11. All guidelines published for 1990 (except those already in print prior to the passage of the legislation) contain the language attached to the 1990 appropriations bill.

12. The Inspector General of the Arts Endowment (a position created by Congress which reports directly to the Chairman) reviews grants for compliance with all accounting and financial criteria.

13. In our 1991 budget request, we seek funds to increase the panel sizes in order to get a broader spectrum of experience, cultures and geography. Our panel sizes range from five to 15. Just as I preferred 12 person juries to six person juries when I was a trial lawyer, I prefer larger panels and hope that Congress will see fit to make them possible.

14. Finally, we have implemented procedures for dealing with subgrants so that they go through essentially the same review by the National Council on the Arts as grants recommended by our own panels do.

Will these modifications in the panel process eliminate controversy? Probably not. I do not see as a desirable goal that the art which the Federal government supports be so bland that no one even notices it. Some art is provocative and rightly so. These modifications are designed to assure that the panel process is as fair, as responsible, and as careful as it possibly can be in identifying the best art which is available for support in this country.

In addition, we are considering modifications to the panel process which require further study before they are accepted or rejected.

a.) Making the panel procedures and guidelines consistent, as appropriate, among the disciplines (such as Visual Arts, Dance, Music, etc.) to simplify the application procedure and make it more easily understood.

b.) Requiring state and local arts agencies, arts service organizations, and perhaps other grantees of the Endowment to submit the names of qualified panelists to assure that the panelist "gene pool" represents all areas of the country.

c.) Identifying better ways in which the panelists can be made fully aware of the past performance of applicants so that the artistic quality of that performance can be judged. Complaints from persons who have not seen a particular performance are seldom reliable measures of artistic quality. We must, however, develop a means by which future panels can to the greatest extent possible accurately and thoroughly consider past performance.

d.) Developing a panelist orientation handbook.

e.) Increasing the number of site visitations of potential applicants within the limits of our budget.

f.) Considering multi-year grants to applicants which are funded on an annual basis. These grants would be subject to the Endowment's annual appropriation from Congress, but would give some certainty to the applicant and would greatly reduce the application load with which the panelists have to deal each year. This reduction would, in turn, allow more in-depth analysis of each applicant.

g.) Finally, because the Endowment is sometimes subject to the charge that the panels are "elitist" or that there is "cronyism," I have directed that an in-depth study of this issue be made. A similar charge was made in 1985, and the resulting evidence proved conclusively that those charges were without foundation. Our preliminary findings also show no evidence of elitism or favoritism. Those results will be made available to you as soon as the study is completed.

Most importantly, you have directed that a Commission study the grant-giving process of the Endowment. We welcome the report of that commission and hope that it will shortly commence its work. Any improvements in our process are certainly welcome, and we are prepared to cooperate with the commission in every way possible.

II. Proposed changes in Reauthorization Legislation

Mr. Chairman, I think it might be useful at this point for me to highlight for the Committee those provisions of the reauthorization legislation that was recently transmitted which directly affect the National Endowment for the Arts. As you know, the proposed bill tracks the National Foundation on the Arts and the Humanities Act, as amended, and therefore includes provisions relevant to each of the agencies authorized under that Act -- The National Endowment for the Arts, the National Endowment for the Humanities and the Institute of Museum Services. While we support those provisions pertaining to our sister agencies, I will confine my remarks today to those sections dealing directly with the Arts Endowment.

By way of overview, let me state that it is our view that our enabling legislation, in its present form, works well and is in no need of substantive revision. We have in the past year been the subject of rigorous scrutiny and consultation concerning our legislation. In our FY 90 appropriations bill Congress prohibited the Arts Endowment from funding any art it deemed to be obscene. This language has caused much concern and confusion among the arts community. The Endowment has, as a result, spent a significant amount of time discussing the matter with the field, as well as studying the directive. After much careful thought and discussion, it is our conclusion that the legislation proposed here which contains no content restrictions, along with measures discussed earlier, will best serve the American public.

We are here today to urge the Committee to act favorably on the single most important provision affecting the Endowment -- and that is a five year extension of our authorization. In addition, there are several technical amendments which we are proposing to fine tune the authorizing legislation. At this point I will outline those provisions relevant to the Arts Endowment in the sequence in which they appear in the bill.

A. Section 2 of the bill amends the definition of the "arts" to recognize explicitly the inclusion of the traditional arts as practiced throughout the country.

B. Section 3 of the bill amends the definition of the term "project" to underscore that programs which enhance public knowledge and understanding of the arts should be available to all people throughout the nation.

C. Section 5 of the bill makes several changes to section 5(c) of the Act. Paragraph 2 is amended to recognize that excellence is embodied in the artistic standards applicable to the traditional arts.

Paragraph 5 is amended to reference education explicitly among the types of arts projects which may be supported. Paragraph 8 was added to describe the authority to provide organizational and managerial assistance to arts organizations.

Paragraph 9 was added to recognize the authority of the National Endowment for the Arts to support international arts activities.

D. Section 6 of the bill revises certain reporting requirements for state arts agencies. Currently, state arts agencies are required by the Act to provide information annually on their activities over the past every two years. The bill requires this information to be reported annually only for the most recent preceding year for which information is available. The bill changes the reporting requirement from the preceding two years to only the preceding year because elswhere, the state has already agreed to provide annual reports. This method was decided upon after a costly and intense study undertaken with the state arts agencies to create an annual information collection system. The change would also prevent the undesirable affect of receiving duplicative information. The bill also increases the scope of the reporting requirement to include all projects funded by state arts agencies. This change also makes the requirement more compatible with existing state information systems.

E. Section 7 of the bill amends the NEA Challenge Program authority to include a new emphasis for the use of Challenge grants: Stimulating artistic activity and awareness with respect to the varied cultural traditions throughout the nation.

F. Section 8 of the bill strikes out the requirement in section 5(m) of the Act that a national information and data collection system be developed by the Arts Endowment and inserts a requirement that such a system be "employed". This change is being made because the system has already been developed pursuant to the requirements of the 1985 reauthorization. The provision that a plan be submitted to Congress within one year of the effective date of the 1985 Act has been accomplished and therefore that provision is also being deleted.

The last sentence which currently provides that the state of the arts report was to be submitted by October 1, 1988, has been deleted because the report for 1988 was submitted, and a second one will be submitted in accordance with the current law by October 1, 1990. The bill would require submission of the next report in 1992, and quadrennially thereafter. Generally, changes in the arts fields do not occur so rapidly as to warrant a full-scale report to the Congress and the President every two years. A four year interval would provide more perspective and thus permit a more significant report. Developments that might occur between reports could be brought to the attention of Congress through Arts Endowment planning documents, congressional budget submissions and reports, the Arts Endowment's Annual Reports, or other appropriate formats.

G. Section 20 of the bill renumbers certain paragraphs as suggested by Congress. Two subsections have also been deleted -- Subsection E required a joint study of arts and humanities education to be conducted by the two Endowments and the Secretary of Education. The study was completed and the report made to the various committees of Congress by the date indicated, thereby fulfilling the requirements of this subsection.

Subsection F required the two Endowments to submit reports to Congress detailing the procedures used in selecting experts for appointment to panels and the procedures used by the panels making recommendations for funding applications. Both studies were completed and submitted to Congress, thereby fulfilling the requirements of this subsection.

H. Section 21 of the bill provides for a five year authorization of definite program appropriations for the Arts Endowment. It authorizes $125,800,000 for fiscal year 1991 and such sums as may be necessary for fiscal years 1992 through 1995.

I. Section 23 of the bill extends the authorization of appropriations for the Arts Endowment's treasury funds for five years. It authorizes $13,000,000 for fiscal year 1991 such sums as may be necessary for fiscal years 1992 through 1995.

J. Section 25 of the bill extends the authorization of the appropriations for the Arts Endowment's Challenge grant program for five years through fiscal year 1995. It authorizes $15,000,000 for fiscal year 1991 and such sums as may be necessary for fiscal years 1992 through 1995.

K. Section 27 of the bill deletes the requirement that if at the end of the ninth month of any fiscal year Challenge grant funds cannot be used by one of the Endowments, that Endowment shall transfer the unused funds to the other Endowment. This provision has been in the law since 1976 when the Challenge program was first established for the two Endowments but has never been used. At the inception of this new program, there may have been the concern that Challenge grantees might not be able to meet the three-to-one matching requirements which would result in some of the appropriated funds not being used during the fiscal year. However, such concern has not been born out. Therefore, deletion of the transfer provision is consistent with the experience of the two Endowments and independence they have as to all other programs.

L. Section 28 of the bill extends the authorization of appropriations for administrative funds for the Arts Endowment by authorizing $20,300,000 for fiscal year 1991 and such sums as may be necessary for each fiscal years 1992 through 1995.

M. Section 30 of the bill extends the authorization of appropriations for the two Endowments for five years and authorizes $175,000,000 for the Arts Endowment for fiscal year 1991 and such sums as may be necessary for fiscal years 1992 through 1995.

N. Section 38 of the bill amends section 5(b) of the Arts and Artifacts Indemnity Act by increasing the aggregate level of insurance available for international exhibitions at any one time to $3,000,000,000. The current statutory limit is $1,200,000,000. This increase is necessary to meet the demand for coverage under the Act and to make the benefits of the Act more widely available. The increase is justified by the continuing escalation in art market values since the current limit was established. The availability of this insurance is key to our staging international exhibitions. Since this program was instituted in 1975, there have been only two certified claims totalling $104,000.

O. Section 39 of the bill amends section 5(c) of the Arts and Artifacts Indemnity Act by increasing the amount of insurance available for a single exhibition to $300,000,000. The current statutory limit is $125,000.000. This increase is necessary to provide adequate coverage of international loans protected by the Act. The higher limit is a realistic accommodation for the effects of the dramatic increase and the value of art objects since the current limit was established. The availability of this insurance is key to our staging international exhibitions.

P. Section 40 of the bill amends section 5(d) of the Arts and Artifacts Indemnity Act by amending the deductible amounts under indemnity agreements by adding layers of $100,000 and $200,000 based on the total value of the exhibition. The current statutory limits are $15,000, $25,000, or $50,000 depending upon the value of the exhibition. The sliding scale formula used to determine the current limits should be applied to the increase and the per exhibition ceiling. The deductible layers protect the U.S. Treasury from multiple claims for minor losses or damage. The amendment would actually limit the budgetary impacts or claims against the Federal government by increasing the exposure of the exhibition organizer who would be responsible for arranging for additional insurance to cover the deductible amount.

Q. Section 41 of the bill repeals Title IV of the Arts, Humanities and Museums amendments which directs the Comptroller General to conduct studies to determine the feasibility of establishing a revolving fund comprised of payments made to the Federal government for the right to use artistic and other works in the public domain with the funds used to supplement funding of the agencies under this Act. Work on the project was terminated after the Comptroller General's Office consulted with members of Congress and determined that the studies should not be pursued.

R. Section 43 of the bill makes these amendments effective on the date of enactment.

GRANT-GIVING PROCESS

Mr. Frohnmayer. We are continuing that process, Mr. Chairman, and members of the committee, to improve the grants-giving process. As recently as today, my deputies met and developed a couple of other procedures which I think will strengthen the grant-giving process, and help it to be more responsible, and more accountable, and clearer to all of us.

I cannot promise you perfection, but I can promise you my absolute diligence. I have one more comment to make, and this comment has the support of the White House. You have created an independent commission which is meeting for the first time today, and I think we all regret that that independent commission has not been able to meet earlier.

But I would urge you now that it is in action to extend the life of that commission, if necessary, so that it might do its job and give to all of us what it was designed by you to do, and that is a rational, and logical, and clearly determined recommendation as to how the grant-giving process of the National Endowment for the Arts can be improved.

PREPARED STATEMENT

I would hope that you would do no radical surgery on the Endowments, either in terms of this committee or others, without first hearing the views of the commission, and while the White House and I personally favor a 5-year reauthorization, if it took a 3-year, or even a 1-year extension for that commission's statement to be heard and acted upon by the Senate and by the House, so be it. I think it is terribly important that the level of this debate be cooled, and that a rational and logical conclusion of it be found by both the House and the Senate.

This problem must be solved, and I pledge to you my full attention to it to see that it is. I welcome your questions.

[The statement follows:]

STATEMENT OF JOHN E. FROHMAYER

Mr. Chairman, Members of the Subcommittee:

I appreciate the opportunity to discuss the budget request for the National Endowment for the Arts for FY 1991. On behalf of myself and everyone at the Endowment, I thank the Subcommittee for its continued support for the work we do.

For FY 1991, the Endowment is requesting a budget of $175 million, $3.74 million above our FY 1990 appropriation. An appropriation at this level will allow us to advance several goals. Increased emphasis will be placed on providing Americans with access to the arts, along with the knowledge and skills needed to participate in and enjoy them. Artistic excellence and preservation of our rich cultural heritage will be fostered through our grants to organizations, artists, and arts professionals.

The Endowment will continue to stimulate increased funding at the state and local levels through the local match required in every grant and by enhancing the public-private partnership which continues to serve as a successful example of how the Federal government, local governments and the private sector can work together to enrich our society.

1989 Endowment Highlights

In FY 89, the Endowment awarded over 3,700 grants to arts organizations and agencies and 880 fellowships and individual grants to artists and arts professionals. In addition, many artists and arts organizations benefited from the Endowment's vital and continuing partnership with state, regional and local arts agencies. In FY 89 the state and regional agencies supported arts programming in communities throughout the country with the help of $26 million provided through the States Program and more than $6.5 million in project support from other Endowment programs. This network for delivery of the arts to all segments of our society, wherever located, is in response to our enabling mandate to:

> "[A]ssist the several States in supporting existing projects and productions. . . and in developing projects and productions in the arts in such a manner as will furnish adequate programs, facilities and services in the arts to all the people and communities in each of the several States."

In 1989, Endowment programs (many of which will continue in FY 91) included:

o A Rural Arts Initiative to assist organizations that have demonstrated the potential to develop artistically and administratively. Grants of $40,000 were made to Alabama, Iowa, Louisiana, New Mexico, and South Carolina; and $25,000 to Alaska for regranting to rural arts organizations within these states. The initiative will continue support to each of these states for up to three years, while adding new states each year.

o In December 1989, the National Task Force on Presenting and Touring issued its final report, "An American Dialogue." The Task Force, created in 1987, has established a network among people and organizations representing diverse artforms and cultural, racial and aesthetic perspectives. The report identifies and clarifies the contributions presenters can make in advancing the performing arts in their communities and across the nation. This focus will be of immense assistance in furthering the goals of this agency in coming years.

o The Endowment supported the first National Black Theatre Festival (NBTF) held in August, 1989 in Winston-Salem, North Carolina. The NBTF brought together a panoply of African-American playwrights, directors, actors, and scholars from all over the country, including such renowned artists as Cicely Tyson, August Wilson and Roscoe Lee Brown. The purpose of the Festival was to increase awareness and appreciation of the remarkable artistry going on in American theaters which feature black actors, writers, directors and other artists. Seventeen companies performed a broad range of works including children's theater, musical theater, and performance art. As a by-product of the conference, many companies received bookings and playwrights found producers. Participants came from all parts of the country and consistently played to full houses.

o The Endowment continues to support the best in major public television broadcasting. In FY 89, we funded nine ongoing television series: Great Performances, (including Dance in America), American Playhouse, Wonderworks, Alive from Off Center, Live from Lincoln Center, American Masters, Point of View, The Independents, and Metropolitan Opera Presents. These series reach audiences in the millions all across the country. We are developing distribution system for cassettes of these programs, and the Media Arts Program is encouraging a new series dramatizing contemporary classics of American literature. A proposed series reflecting on the accomplishments and challenges of the 20th century is an exciting opportunity but one which we currently lack the resources to pursue.

o The wisdom of our support for individual artists was confirmed in an extraordinary way last month. All of the

1990 Pulitzer Prize winners in the arts fields have been assisted by the Endowment earlier in their careers: the 1990 Pulitzer Prize Award for Fiction went to Oscar Hijuelos, a 1985 Literature Program Creative Writing Fellowship grantee; the Pulitzer for Poetry went to Charles Simic, a 1979 Literature Program Fellowship grantee; and the Pulitzer for Music Composition went to Mel Powell, who in 1988 received a Composer's Fellowship. August Wilson, who won the Pulitzer for Drama, has been working closely for several years with the Yale Repertory Theater, a long-time Endowment grantee.

o During 1989, the National Council for the Traditional Arts extended the range of Folk Arts touring by taking its highly successful "Masters of the Folk Violin" on tour to California, Oregon and Washington. Nearly every concert on the three-week tour sold out. Other folk arts performances supported to date include Raices Musicales and Heroes of the Steel String Guitar. A major national folk arts touring program is in the planning stages.

o Our Challenge III Program awarded 25 grants totaling over $9 million in FY 88. These grants support major projects designed to have a long-term impact on artistry, access, appreciation and increased non-Federal funding of the arts. The new grants assist regional as well as locally-based projects. The Southern Arts Federation will use its grant to encourage model rural and minority arts programs; Utah's Ballet West will create an innovative touring program to reach underserved urban and outlying communities in the western states; and the New England Foundation for the Arts will increase support for audience access to talented contemporary and folk artists. Seven states (Arizona, California, Massachusetts, Minnesota, New York, North

Carolina, and Ohio) which collectively serve 40 percent of the nation's artist population, will form a consortium to increase support for artists.

Future Goals and Directions

Our FY 91 budget request emphasizes three areas: continued support for our arts institutions and artists, promotion of arts education, and increased multicultural and rural arts participation.

Support to Cultural Institutions and Artists

Support to our cultural institutions and American artists continues to be a priority. They play a critical role in allowing us to know our past and to discover our future. In the face of rising costs and an unpredictable philanthropic climate, we cannot afford to mortgage that future by assuming that these institutions, many of which we count among our national treasures, can exist without the continued support and encouragement federal funding can provide. These are examples of past achievements upon which we will continue to build in 1991.

o For instance, in FY 89 the Chicago Symphony, which is recognized globally for its extraordinary performances, received $286,000, one of the largest grants in the Orchestra category to assist in presentation of its subscription series at Orchestra Hall. The series is expected to attract an overall audience of 250,000 or more in 1989-90. Pre-concert conversations, featuring the evening's soloists and guest conductors, have enjoyed standing-room-only audiences, and a recent survey confirmed that these conversations have greatly enhanced the concert-going experience.

- For years, the Arts Endowment has supported professional opera companies of artistic excellence who produce and present both foreign and American works. The Opera Theatre of St. Louis is a gem in this tradition of excellence. A $105,000 grant by the Arts Endowment helped the Company with its 1988-1989 production season which included the production of "Double Moon" -- a world premiere by African-American composer Anthony Davis. The multiracial casting for this production offered local minority artists the opportunity to perform.

- A project of the UCLA Film, Television, Radio Archives to make preserved films available to media arts centers was supported with a grant of $25,000. Films preserved by the Archive include such classics as Josef von Sternberg's Blonde Venus, Orson Welles' Macbeth, and Ernst Lubitsch's Monte Carlo.

As the recent Pulitzer Prize winners confirm, we must continue to support our nation's individual artists who are at the forefront of our progress in the arts. Without funds or grants to individuals, we could not assist choreographers, composers, writers, poets, crafts persons or many, many others who contribute significantly to the artistic climate of this country. I would consider my tenure here an overwhelming success if we were able to discover and help the career of a single Mozart -- another Mark Twain or a young Balanchine.

Arts Education

The nation is concerned, and rightly so, about the quality of our young people's education and whether they will be prepared for the challenges of the future.

The arts teach creativity. They challenge the student to think broadly, to attempt the new, and to risk failure. The arts teach young people to see and hear as well as read and write, to make order out of chaos, to view the world, in both its challenges and problems, through many perspectives. The arts help children to understand civilization so that they can benefit from our past history, and dare new expression, try various approaches to problem-solving, use intuition as well as reason, and develop the discipline required for serious creative activity. In a culturally diverse society such as ours, the arts can promote an understanding of both the core and the multiplicity of America's culture.

William James, the writer and pioneer in the field of psychology. had this to say: "The union of the mathematician with the poet, fervor with measure, passion with correctness, this surely is the ideal." A well-rounded person will have an education strong in the sciences, humanities and the arts. As our national agenda turns to education, the Endowment has an important and timely opportunity to influence the course of arts education. We believe that it essential to pursue modest initiatives in this area, not just for the cultural literacy of coming generations, but to assure the existence of future audiences, artists and thinkers.

Orchestras, opera, theater and dance companies and museums often have eliminated or reduced educational programs to use their scarce resources for their primary mission of presenting arts.

In addition to our regular programs of project and seasonal support, we hope to encourage arts institutions to expand their efforts in providing educational opportunities which will foster learning in the arts and improve the daily lives of the people in their communities. These educational efforts, particularly when they are in partnership with local schools, will broaden the appeal of our arts institutions and will "demystify" the arts, making them increasingly accessible to all Americans.

We are currently investigating ways to integrate our arts education efforts with local education authorities, teachers, artists and business. Arkansas, for example, is seeking a corporate partner for each school. The corporate partner would provide money, space, volunteers and support. The Governor called the businessmen in and challenged them to promote such a program. Such innovative ideas and new approaches will help give our children the quality arts education they deserve. The Endowment can and should be a leader, a catalyst and a participant.

One of our most thoughtful jurists, Judge Learned Hand, said 38 years ago:

> "[A]n education which includes the 'humanities' is essential to political wisdom. By 'humanities' I especially mean history; but close beside history. . . are letters, poetry, philosophy, the plastic arts and music. Most of the issues that mankind sets out to settle, it never does settle.
>
> . . .He who would find [compromise to issues] needs an endowment as rich as possible in experience, an experience which makes the heart generous and provides the mind with an understanding of the hearts of others."

Of course, the arts and humanities do just that. We build the character of tomorrow's leaders through an education strong in the arts and humanities. The Endowment's investment in such an education is an investment in creativity -- the currency of the 21st century.

Rural and Multicultural Arts Participation

In all of its activities, the Endowment pursues its mission in a multicultural, ever-changing society. This constitutes a tremendous opportunity for the arts to grow, to interact and to benefit by the richness of our nation's diverse cultures and populations. We must preserve and enlarge the core of our artistic heritage, and we must encourage all Americans to be aware of the variety of the arts in the country. In addition to providing access through our regular program categories, in FY 91 the Endowment will explore special initiatives designed to make its programs more available to rural and multicultural populations.

Again, we will build on past successes:

- Media Arts Program grants in Alaska. Radio plays an important part in the life of rural Alaskans. It is expensive and at times difficult to travel to cultural activities throughout the state. Radio offers Alaskans the opportunity to be there. Through Arts Endowment funded programs like ALASKANARTS and National Native News, Alaskans have been a part of the Potlatch at the Saxman Tribal House, the statewide Folk Festival in Juneau, or have listened to the Anchorage Symphony playing a piece inspired by and reacting to the Prince William Sound oil spill. They have heard the voices and music of the St. Mary's Dance Festival, or, with their imaginations, have walked through a grove of paper trees created by Anchorage artists and Arts Endowment visual art fellowship recipient, Karen Stahlecker.

- Artists of Indian America (AIA) in Albuquerque which received a grant of $15,000. AIA was established ten years ago to inspire cultural and social improvement among American Indian people. Unique among Native American arts organizations, its artistic director, Bonnie Jo Hunt, an opera singer who has won acclaim in Europe, presents classical music to the Pueblos. However, the traditional program is particularly noteworthy, offering workshops in dance, music, song and storytelling. AIA is committed to working with Indian people in their own communities to maintain traditional customs, language and values. As the only national organization of its kind, its program model has been considered for use in the preservation of other cultures, such as the Australian Aborigine.

FY 1991 Proposed Budget

We request $125.8 million in program funds for:

Continued support for artists and arts organizations of excellence. Funding for the twelve disciplinary programs is consistent with the FY 90 enacted level. Funding at this level will enable these programs to continue to encourage artists and arts organizations of merit, increase access to the arts, preserve the art of the past, and create the art of the future.

Funding to develop and continue projects and initiatives which will make artistic expression of all kinds accessible. Allocations for large funding categories such as Presenting Organizations (Inter-Arts), Programming in the Arts (Media Arts), Special Exhibitions (Museum), and Presenters/Festivals (Music) will remain at or above FY 90 enacted levels. In addition, the Endowment will: continue existing outreach initiatives such as Dance On Tour (supported by the Dance, Inter-Arts and States Programs) and the Syndicated Fiction Project (Literature); and develop new initiatives such as a major national tour of folk artists (Folk Arts and Inter-Arts); a project to provide funds to small and rural communities to help them address complex design issues (Design Arts); and tours of art exhibitions at low rental rates to small and rural communities (Museum Program).

Increased support for arts education. The research outlined in Toward Civilization, a study done in 1988 in response to a Congressional mandate, suggests a more catalytic role for the Endowment in assisting arts education. An increase of $2 million over the FY 90 appropriated level would enable the Endowment to enhance its leadership and support in arts education by:

1. Encouraging current grantees to provide educational services in partnership with local education and civic groups.

2. Increasing State Arts in Education Grants, which provide funds for artist residencies and other related activities. (Many of these were reduced in past years to provide funding for research and curriculum development.)

3. Continuing to assist state arts agencies through Arts in Schools Basic Education Grants in collaborating with their departments of education, professional teachers groups and others to promote the arts as a basic element of education.

4. Providing funding to not-for-profit organizations such as arts institutions, educational institutions, and local, state and regional arts agencies for quality projects of

national and regional significance which advance arts education.

Provide increased support for Advancement grants. The Advancement Program operates on a two-year funding cycle in which organizations may enter the Program only in the year that applications from their respective disciplines are being accepted. Those in the first group were from less institutionalized fields (e.g., expansion arts, folk arts and literature); 36 organizations successfully completed the process leading to an Advancement grant. In the second group, which contains more institutionalized fields (e.g., museum, music and theater), we expect 50 organizations to be awarded Advancement grants. The higher expected completion rate in the two groups will create a funding disparity between the funding cycles, therefore an increase of $350,000 from the FY 90 enacted amount is requested.

Matching Funds

In FY 91, the Endowment requests $28.0 million in matching grant funds -- $13 million for Treasury and $15.0 million for Challenge III -- to maintain and generate increased non-Federal contributions to the arts. Specifically:

Increases the level of Treasury funds to $13 million. These funds, which are matched three to one, will support large-scale projects undertaken by organizations eligible under our discipline programs in the performing arts fields as well as the fields of media arts and museums.

Maintains funding for the Challenge III program at $15 million. These grants, which are matched on at least a three-to-one basis, will be used to support innovative projects aimed at change and growth benefiting the arts and their audiences. An allocation at this level will enable us to make an estimated 40 grants in FY 91. This request is consistent with our past two years experience with the Challenge III program.

Administration

The Endowment requests $20.3 million in operating administrative funds for FY 91, an increase of $1.7 million, 9.1 percent over our FY 90 appropriation. This request is the minimum necessary effectively to manage the agency. This will allow us: partially to cover increases in personnel compensation, rentals and contractual services over which we have no control; continue to support the integrity of the peer panel process by providing equitable compensation to our panelists; broaden the panels to obtain greater geographical, cultural and experiential representation as part of our response to criticisms received by this agency; restore activities such as procurement of ADP and other equipment and staff travel deferred in FY 90; and, increase our authorized level of full-time equivalent staff from 264 to 267. As the number of applications increases yearly, the burden on staff and resources becomes greater. The mandate that the agency review all sub-grants places a significant additional burden on present staff.

International

Given the lead time for budget preparation, no special attention is given to international activities in the proposed budget. But the world has become a very different place in the past nine months. This window of opportunity to reach out to new democracies through the international language of the arts is one which we surely should consider. Such an opportunity to solidify the bonds of freedom and full expression may not present itself again in this generation.

The Endowment's activities in the International realm have been modest to date, primarily contributing money, with USIA, for international performers and representatives of the U.S. in some international festivals. Depending on availability of funds, artist exchanges, international exhibitions and greater export of American culture would be desirable. At least one country newly embracing democracy has requested cultural exchange. We hope to be able to respond, in some modest way, to that invitation.

FY 1990 Appropriation Language

In this past year, Congress and the Endowment have struggled through times of unprecedented turbulence in attempting to determine the proper role of Federal arts funding. Compromise language, probably fully satisfactory to none, was adopted after heroic efforts by this committee.

The primary goal, to which this agency and all members of Congress ascribe, is that obscenity not be funded. Since obscenity was already illegal before last year's legislation, however, and because the FY 90 appropriations language could be interpreted differently from established judicial precedent, the FY 90 language has made our task more difficult rather than easier. As I testified in our reauthorization hearings, "After much careful thought and discussion, it is our conclusion that the legislation proposed here which contains no content restrictions, along with measures discussed earlier [to improve the Endowment's peer panel review process], will best serve the American public."

The confusion the FY 90 language has caused with some distinguished members of the arts field is demonstrated in the letter from Joseph Papp, attached with permission of its author. We hope that, with a new administration at the Endowment and our commitment to thorough review and modification, where appropriate, of our procedures, such language will not be deemed necessary in FY 91.

BIOGRAPHY OF JOHN E. FROHMAYER

John Frohnmayer was nominated by President Bush and on September 29, 1989 was confirmed by the Senate as the fifth chairman of the National Endowment for the Arts.

A former chairman of the Oregon Arts Commission, Mr. Frohnmayer was most recently a partner with the Portland, Oregon law firm of Tonkon, Torp, Galen, Marmaduke & Booth, where he specialized in civil litigation.

Mr. Frohnmayer was a member of the Oregon Arts Commission from 1978 to 1985, serving as its chairman from 1980 to 1984. An accomplished singer, he has studied with Ivan Rasmussen at Stanford, Dolph Swing in New York, and Gibner King and David Jimmerson in Portland. Mr. Frohnmayer has appeared in recital, oratorio, musical comedy, and various other musical productions in New York City, Chicago, Palo Alto, California, and around the state of Oregon.

He served as director of the International Sculpture Symposium in Eugene, Oregon in 1974 and as chairman of the Screening Committee to select art for the Oregon State Capitol Building in 1977. He is a founding member of the Novum Cantorum (chamber choir) and has served on the board of Chamber Music Northwest. He also served on the National Endowment for the Arts Opera-Musical Theater Panel in 1982 and 1983 and was a director of the Western States Arts Foundation. In the past he has served as a director of the City Club of Portland, a trustee of Holladay Park Plaza, secretary of the Station L. Rowing Club, and is a Fellow of the American Leadership Forum.

Mr. Frohnmayer began his law career in 1972 with the firm of Johnson, Harrang & Mercer in Eugene, Oregon, where he practiced for three years. He has spoken and written for the Oregon State Bar on various subjects, served as chairman of the Bar Committee on Domestic Law from 1975 to 1976, served on the Procedure and Practice Committee from 1984 to 1985, and is a member of the American Bar Association Committee on Commercial Transactions Litigation as well as the Multnomah County, Oregon and American Bar Associations.

A 1964 graduate of Stanford University where he received a B.A. in American History, Mr. Frohnmayer later attended the Union Theological Seminary in New York from 1964 to 1965 as a Rockefeller Fellow. He served as an officer on active duty in the United States Navy from 1966 to 1969 and was decorated for bravery.

Mr. Frohnmayer received a Masters Degree in Christian Ethics from the University of Chicago in 1969, and in 1972 received his J.D. from the University of Oregon. He was editor-in-chief of the Oregon Law Review from 1971 to 1972 and was elected to the Order of the Coif (legal honorary) in 1972.

Born in Medford, Oregon in 1942, Mr. Frohnmayer is married to Leah Thorpe Frohnmayer. The couple has two sons, Jason and Aaron.

REFORMS

Chairman BYRD. You indicated that you have suggested in testimony earlier before other committees certain processes or reforms that will deal with some of the problems that have been much discussed, and I believe you indicated that you have made 14 proposals. Would you briefly summarize for the subcommittee what those recommendations are?

Mr. FROHNMAYER. Yes, sir; we have developed grids which are designed to get broad geographical distribution of the panelists that come in and make the recommendations to us. As you know, there are over 800 panelists who come in each year to do the work of the Endowment.

They are all citizens, and many of them are artists, and many of them are involved in the work of the arts, and we want to make sure that we have broad geographical distribution and this grid helps us do that.

The same is true, insofar as we have been able to tell, with points of view. It would be unfortunate if there were any kind of a skewing of points of view toward one aesthetic or one particular point of view, and so we try very diligently to make sure that the panels have different points of view.

And we do the same with the grid with cultures, because we want to make sure that there is wide distribution in terms of the peoples of this country, since we have some 170 different ethnic groups that are part of our citizenry, and I think that is one of our country's strengths.

We also look at gender, and we look at varying experience insofar as we are able to, and that is again all part of this grid process. One of the things that I have insisted upon and we are implementing is to have some representation of lay people on the panel; the reason being that I think it brings a little different perspective to moderating and informing the panels.

Now, I am not talking about people who don't know anything about art. I am talking about educated lay persons, who are able to be conversant in the area. We have opened our policy panels, where they discuss the policies in the field, to the public for public scrutiny.

We have a system of site visitors who go out and spend time at our grantees, and write up a comprehensive report, and those site visits are often very helpful to the panelists and to ourselves in the Endowment in trying to determine what exactly goes on in any given arts agency, and whether it is administratively sound and so forth.

I attend each panel, Senator, at the beginning, or if I am not in town, or unable to attend, one of my deputies does, and I explain to them what the law is that was passed in fiscal year 1990, and I explain to them what their responsibilities are, and I discuss these with them to the extent that the discussion is desirable and necessary.

I also ask them to make a very careful record, a record that is both recorded and notes are taken by designated people in the room, to make sure that the guidelines are followed, because we have printed guidelines for each of our disciplines, and I tell the panels that if you come upon an issue where you think that a project is of specific artistic value, and it is competitive among the others that you are dealing with, but you think it might be subject to criticism on the basis of a fiscal year 1990 law, then I want you to make a very careful and clear record for two reasons.

One, to make sure that you, yourselves, are convinced that this project is absolutely of specific artistic value, and, second, to make sure that you state on the record for everybody to know why it is, why it is that you think it is artistically significant.

That gives me and the rest of the Endowment a record from which to work and indeed, if the grant is later criticized after it has come through the process of the National Council and myself, then the reasons for which it was given are clearly stated.

I will go very quickly through the other things. The National Council is encouraged to observe panel meetings. Grant notification letters for 1990 state upfront the requirement that the grantees must adhere to the fiscal year 1990 language regarding the grants.

Guidelines that were published after that law was passed include the language. This has been criticized by some. When they apply to drawdown the funds, the language is in the general terms and conditions of our grants.

I also have an inspector general, as every agency does, which reports by statute directly to me. He and his staff are able to review the grants for compliance with the accounting and financial criteria, and any other deficiencies that they have.

We have in our 1991 budget sought an increase in funds for panel sizes, because it is my belief that larger panels are part of the answer to getting a full panoply of public view on any given question. It is just like I preferred 12-person juries to 6-person juries when I was a trial lawyer, and I think you can get a better mix of people, and more opinions, and what comes out is likely to be wiser.

And, finally, as to grants that may be questionable, they are identified at the deputy level, and they go to the general counsel of the agency for opinion before they go to the National Council for the Arts. Those are the particular things that we have put in place, Senator. But I will tell you that those are only part of the puzzle, because on a daily basis we are working to make that system as responsible as we possibly can.

Chairman BYRD. Does any statute limit the inspector general's involvement to the accounting and financial areas, or can you use the inspector general as a means of reviewing the actual purposes to which grantees applied their Federal funds?

Mr. FROHNMAYER. There is no such limitation on the activities of the inspector general, and, yes, he could be used—he and his staff could be used for that purpose. Certainly they do look for discrepancies in general, but their focus, heretofore, has been on accounting matters.

Chairman BYRD. How do you propose to address the concerns of those who will argue that an authorization and appropriation devoid of any restrictions while the commission conducts its deliberations may result in more controversial grants being awarded?

Mr. FROHNMAYER. This controversy has been debilitating to my agency. We are doing everything that we can to not only institute responsible procedures, but to try and tone down the level of this controversy.

It is in the end, I believe, a question of judgment, and I would hope that this committee and others would allow my administration time to exercise that judgment; and I have been here for 6 months, and there has not been a day that I have been here that I have not been emersed in controversy.

But I would very much like to be about doing the business of the arts, and that is what I came here to do.

Chairman BYRD. How do you propose to reconcile the artistic excellence standard which is at the center of the Endowment's authorizing legislation, with the works of Mappelthorpe, Serrano, and Wojnarowicz?

Mr. FROHNMAYER. I do not, Senator. Those grants are not ones that I am here to defend. What I am here to do is to tell you, as I have and as I will continue to do, that responsible procedures within the agency are the answer to these questions, and I have every intention of implementing responsible procedures.

Chairman BYRD. You are ultimately accountable for all NEA grant awards. You receive advice and recommendations from the National Council on the Arts. What has been the effect of section 304 of the 1990 Interior bill on your deliberations with the Council?

Mr. FROHNMAYER. Well, in the last Council session, which was about 3 weeks ago, the Council recommended denial of two grants to the Institute for Contemporary Art in Philadelphia, I think feeling that Congress might be offended if those grants were given.

I think we need to look at that issue again, because I think we lost sight of artistic excellence there, and that is one effect of last year's legislation. The Council also deferred a whole group of grants with, I believe, the legitimate concern that not enough information was provided to them to be able to adequately opine on those grants. So that group of grants will be taken up in the August meeting, and additional information will be provided to the Council in order to inform them.

But overall I would tell you that this legislation, I think, is very much like a sort of pall over the Endowment. We are all human beings, and even though the judge may say to disregard the last testimony, it is not anything that we can disregard, and it is very much affected all of our actions.

Chairman BYRD. You have come under criticism for including recitation of the appropriations language with respect to the use of funds appropriated in the grant applications and notifications that potential awardees receive.

What other steps did you consider, and have you taken to ensure that the law is being obeyed?

Mr. **FROHNMAYER**. We attempted to make every effort to assure that our grantees knew the law you passed, and, in so doing, we put it in all of the guidelines that had not yet been printed, we announced it to the field generally, and we put it in the general terms and conditions for which we have been criticized by some grantees.

For that I do not apologize. It is the law, and you passed it, and my duty is to enforce it. I will tell you that I do not agree with it, in the sense that I believe that it confuses the incentive area, and there is *Miller* v. *California,* which is the judicial test, and a clearer test. But as long as I am a member of the executive branch, I am sworn to uphold the law and have every intention of doing so.

Chairman **BYRD**. We have read recently of the decision of the New York Shakespeare Festival to decline a grant due to the language. Are there other similar instances of potential awardees declining grants because you have asked them to obey the law?

Mr. **FROHNMAYER**. I know of one choreographer, a lady named Fern Ackerman, in California, who turned down her grant, and I read in the paper that the University of Iowa press intends to, but we have not received any notification of that.

We are also being sued by the school over the particular language in the certificate.

Chairman **BYRD**. Would you not agree that it is entirely the prerogative of Congress to exercise its oversight role for the grants funded by the NEA?

Mr. **FROHNMAYER**. I agree with that absolutely.

Chairman **BYRD**. You have indicated that NEA did not fund the "Annie Sprinkle" performance, but that a general support grant was provided to the Kitchen Theater. Would you explain?

Mr. **FROHNMAYER**. Yes, sir; we gave—and by we, meaning the Endowment in fiscal year 1989, a grant to the Kitchen for its operational support, and that grant was totally drawn down for reimbursement of expenses already expended by August 1989.

The "Annie Sprinkle" performance at the Kitchen did not take place until January 1990. We had no money in that project, and I have said repeatedly that had that project ever come before us that the National Endowment would not have funded it.

I would say two other things in that regard, Senator. The first being that this information about "Annie Sprinkle" was looked at very carefully by the House reauthorization committee, and I believe that they determined unanimously and unequivocally that we did not fund that.

This also was a question reviewed by the General Accounting Office in an investigation that has just been concluded on behalf of Senator Helms, and they likewise found that "Anne Sprinkle" was not funded by the Arts Endowment. I would give to you and ask you to insert in the record if you choose the GAO testimony that was given this morning before the Subcommittee on Postsecondary Education in the House.

[The statement follows:]

STATEMENT OF HENRY R. WRAY, SENIOR ASSOCIATE GENERAL COUNSEL, OFFICE OF THE GENERAL COUNSEL, GENERAL ACCOUNTING OFFICE

Mr. Chairman and Members of the Subcommittee:

We appear before you, at your request, to discuss how the National Endowment for the Arts (NEA) has complied with section 304(a) of the 1990 Interior Department and Related Agencies Appropriation Act. As you know, section 304(a) prohibits fiscal year 1990 funds appropriated to NEA from being used to promote, disseminate or produce materials which in the judgment of NEA may be considered obscene and have no serious artistic value.

GAO has not undertaken an in-depth review of NEA's implementation of section 304(a). However, we have conducted a preliminary legal analysis of NEA's responsibilities under the statute and the legal sufficiency of the controls NEA has put in place to carry out its responsibilities. The attachment to my statement discusses our analysis in detail. With your permission, I would like to summarize our conclusions and recommendations, and submit the detailed attachment for the record.

While section 304(a) was the product of intense controversy, we think the effect of the law is clear on three basic points. First, the law leaves to NEA's judgment determinations about what materials violate the funding prohibition. Only NEA can determine, at least in the first instance, that a violation has occurred. Second, the NEA is to be accountable for its determinations. Third, NEA is to apply the test of obscenity prescribed by the Supreme Court in Miller v. California, 413 U.S. 15 (1973), when making its determinations under the statute.

According to NEA, it has incorporated the language of section 304(a) as an express term and condition of every fiscal year 1990 grant award. It also requires that the statutory language be made an express term and condition of all subgrants. In addition, the NEA Chairman or a senior official briefs all panels that review its grants on the requirements of section 304(a). NEA has installed a procedure whereby any grant application that, in the opinion of the panel, raises potential compliance issues is submitted for further review and, ultimately, for determination by the Chairman.

We believe that these controls at the grant making stage are appropriate. However, controls over grant awards cannot guarantee that funds will not be used in a manner inconsistent with section 304(a). For example, it may not be possible at the grant award stage to make definitive judgments about materials that have yet to be produced. Therefore, even after a grant is awarded the grant funds could be used contrary to the statute. If NEA determines that a violation has occurred, recovery of the misspent funds would be required. The NEA's organic act provides, in this regard, that whenever the NEA Chairman finds, after reasonable notice and opportunity for a hearing, that grant funds have been diverted from their purposes, no further grants may be made to the recipient until the diverted grant funds have been repaid.

Based on our analysis of the information provided by NEA, we believe that NEA has met its legal obligation to adopt reasonable controls designed to prevent violations of section 304(a) and that it has the ability to seek recovery of any grant funds that may be used in violation of section 304(a). There are, however, several potential problem areas in which we believe NEA could enhance compliance with the statute by issuing additional guidance.

The first area involves the standards that govern the application of section 304(a). Concerns have been raised that the statutory language is vague and may even be unconstitutional. As noted previously, our reading of the statutory language together with its legislative history suggests that Congress intended the NEA to apply the test of obscenity formulated by the Supreme Court in Miller v. California. Therefore, section 304(a) only prohibits the funding of materials that are actually obscene under Miller. We recommend that NEA formally issue a policy stating that it will apply the Miller test in order to respond to concerns over the alleged vagueness of the language.

The second area of concern is how to apply section 304(a) to so-called "seasonal support grants" which provide funding for the general operations of the recipient organization. It may not be obvious whether seasonal support grant funds are used "to promote, disseminate, or produce" particular materials with the application of the statute. For example, it may be difficult to determine whether or to what extent the use of grant funds to underwrite a portion of the administrative costs of a theater can be related to the specific performances offered by the theater. Again, this is an area in which we believe formal guidance by NEA would be useful.

The third concern relates to the difficulty of making determinations at the grant award stage on whether materials to be produced under the grant will run afoul of section 304(a). We recommend that NEA consider adopting a procedure whereby grantees could seek advisory opinions from NEA at a later stage concerning whether they are in jeopardy of violating section 304(a). It might be possible in some cases for NEA, in response to a request from a grantee, to advise the grantee whether a potential use of grant funds would violate the statute.

We have discussed our three recommendations with NEA officials and they have agreed to consider them.

Mr. Chairman, that concludes my prepared statement. We would be happy to answer any questions.

ATTACHMENT

LEGAL ANALYSIS OF SECTION 304(a) OF PUBLIC LAW NO. 101-121 AND NEA's ACTIONS UNDER SECTION 304(a)

I. Nature and Scope of Section 304(a)

Section 304(a) of the Interior Department and Related Agencies Appropriation Act, 1990, approved October 23, 1989, Pub. L. No. 101-121, 103 Stat. 701, 741, 20 U.S.C. § 954 note, provides:

> "None of the funds authorized to be appropriated for the National Endowment for the Arts or the National Endowment for the Humanities may be used to promote, disseminate, or produce materials

> which in the judgment of the National Endowment for the Arts or the National Endowment for the Humanities may be considered obscene, including but not limited to, depictions of sadomasochism, homoeroticism, the sexual exploitation of children, or individuals engaged in sex acts and which when taken as a whole do not have serious literary, artistic, political, or scientific value."

This language was the product of congressional concern over decisions made in prior years by the National Endowment for the Arts (NEA). In particular, calls for increased accountability in NEA's grant making process grew out of NEA's funding of exhibits of the works of Robert Mapplethorpe and granting of a fellowship to Andres Serrano.[1] The Senate adopted an amendment to the House-passed version of the Interior Department appropriation bill (H.R. 2788) that prohibited the use of any funds authorized by the bill to promote, disseminate, or produce materials that were obscene or indecent, denigrated a religion, or denigrated or debased a person or group on the basis of race, creed, sex, handicap, age or national origin.[2] At conference the language of section 304(a), quoted previously, was adopted in lieu of the Senate-passed language.[3] While section 304(a) generated considerable debate on policy grounds, the purpose and effect of its provisions appear reasonably clear on three basic points.

First, the language of section 304(a) is explicit in committing to the judgment of NEA determinations concerning what materials violate the funding prohibition. This commitment of discretion to NEA is confirmed by the legislative history. Representative Yates, Chairman of the House Interior Appropriations Subcommittee and a conferee, stated during House consideration of the conference report:

> "[I]t was the conferees' intention to leave within the discretion of the . . . chairperson of NEA, the decision as to whether or not there was enough social merit . . . to justify overcoming the possibility of obscenity and approving the grant."[4]

Representatives Rohrabacher and Yates then engaged in the following colloquy to the same effect:

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[1] See the conference report on the legislation enacted as Pub. L. No. 101-121, H.R. Rep. No. 264, 101st Cong., 1st Sess. at 78 (1989).

[2] See 135 Cong. Rec. S8806-8809 (daily ed., July 26, 1989).

[3] In addition to the funding restrictions enacted as subsection 304(a), the enacted version includes as subsection 304(b) provisions requiring the establishment of an independent commission to review and report to Congress on NEA's grant making procedures. 103 Stat. 741-742.

[4] 135 Cong. Rec. H6521 (daily ed., Oct. 3, 1989).

> "MR. ROHRABACHER. So, Madam Speaker, the intent of the conference was not to set any standard that would prevent a Mapplethorpe exhibit; is that correct? And what the gentleman is suggesting is that the intent of the conference was not to prevent the refinancing and the resubsidization of an exhibit that was exactly the same as the Mapplethorpe exhibit?
>
> "MR. YATES. I am telling the gentleman that it was the intent of the conference to leave that decision within the discretion of the Chairman of the NEA . . . "5/

Likewise, there was general recognition during Senate consideration of the conference report that decisions concerning application of the funding prohibition would be left to NEA. For example, Senator Helms specifically referred to the Rohrabacher-Yates colloquy, quoted above, several times in expressing his disagreement with the conference language.6/ Senator Byrd, a proponent of the conference version, responded:

> "We are dealing with issues of judgment, and the responsibility for making that judgment must be assigned to an individual or agency. The language in the conference report does assign responsibility for making these judgments to the Endowments; and, in that respect, I believe it is superior to the language offered by the Senator from North Carolina."7/

Second, Congress clearly intended that NEA would be accountable for its judgments in applying section 304(a). The following exchanges typify a theme that runs throughout the House and Senate debates on the conference report:

> "MR. WALKER. So if in the future something would happen that would fall through the cracks here and we would end up with something that many people would regard as being egregious in the mode of Serrano and Mapplethorpe, we then, under this amendment, can hold the Chairman of the [NEA] directly responsible for having funded those projects? Is that right?
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> MR. REGULA. That is absolutely correct. . .
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> . . . . . .
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> "MR. WALKER. The problem for some of us was that when we contacted the National Endowment early on about these exhibits, when I discovered it, for instance, and wrote letters, the letter I got back from the National Endowment basically said, 'We have no responsibility for this.'

5/ Id.

6/ 135 Cong. Rec. S12967-68 (daily ed., Oct. 7, 1989).

7/ Id., at S12970.

> "MR. REGULA. I think that will be different.
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> . . . . .
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> "MR. WALKER. If the gentleman will yield further, in other words, in the future, I am not going to get another letter from the National Endowment for the Arts shrugging their shoulders and saying, 'I am sorry, there is nothing we can do about it. That taxpayers' money is gone?'
>
> "MR. YATES. The gentleman is correct."8/

Third, it appears that Congress intended NEA to use the three-prong obscenity test prescribed by the Supreme Court in Miller v. California, 413 U.S. 15 (1973), when making its determinations under section 304(a). The Miller test is: (1) whether the average person, applying contemporary community standards, would find the material in question, taken as a whole, to appeal to the prurient interest; (2) whether the material depicts or describes in a patently offensive way sexual conduct specifically defined by the applicable state law as written or authoritatively construed; and (3) whether the material, taken as a whole, lacks serious literary, artistic, political or scientific value. 413 U.S. at 24.

Representative Yates explained that the Miller standards, complemented by NEA's basic statutory mandate to fund projects of substantial artistic and cultural significance,9/ would be applied under section 304(a):

> "Madam Speaker, the conferees agreed that obscenity is to be a factor in grant making in the future and that in the event that an application were judged to be obscene, then there were certain other factors that come into play, just as they did in the case of the Miller [decision], with which I am sure the gentleman is familiar.
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> "Madam Speaker, my colleagues will remember that there were three qualifications in the Miller decision; one, whether it was prurient; two, whether or not it was antagonistic to what was the standard in the community; and third, whether or not it possessed literary, scholastic, political, or scientific merit; all of these factors, may I say, plus, the standard which is now in the law that requires artistic excellence and the highest quality of art to be in the applications that are approved. If the applications do not possess 'artistic and humanistic excellence,' whether they

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8/ 135 Cong. Rec. H6523-24 (daily ed., Oct. 3, 1989).

9/ See note 15, infra.

> are obscene or not, they ought not be approved. If they are obscene, then it was the conferees' intention to leave within the discretion of the . . . chairperson of NEA the decision as to whether or not there was enough social merit of the kind that are outlined in those four categories to justify overcoming the possibility of obscenity and approving the grant. Except for that, then the obscenity would take over."10/

Likewise, Senator Jeffords observed:

> "[T]he conferees agreed upon a more moderate version of the Helms amendment. They looked to the 1973 U.S. Supreme Court Miller standard for a definition of obscenity, and agreed that Federal funding should be denied to artistic work that 'when taken as a whole does not have serious literary, artistic, political, or scientific value.' Thus, the first amendment test is probably passed."11/

Indeed, the Senate rejected an amendment to the conference language in part because it was viewed as imposing new and possibly vague standards for judging obscenity.12/

The actual language of section 304(a) recites only the third prong of the Miller test. However, given the legislative history, it appears that the statutory phrase "may be considered obscene" was intended to incorporate the first two prongs of Miller.13/ In essence, therefore, section 304(a) prohibits the use of fiscal year 1990 NEA appropriations to promote, disseminate, or produce materials that NEA determines to be obscene under the Miller test. Such materials "may be considered obscene" by NEA if NEA determines that, taken as a whole, they would appeal to the prurient interest and depict or describe in a patently offensive way sexual conduct specifically defined by law, applying the contemporary standards and law of the community where the material will appear. An NEA determination that

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10/ 135 Cong. Rec. H6521 (daily ed., Oct. 3, 1989).

11/ 135 Cong. Rec. S12971 (daily ed., Oct. 7, 1989).

12/ Id. (remarks of Senator Byrd); id., at S12970 (remarks of Senator Gorton).

13/ The legislative history does not explain the phrase in section 304(a) that follows "may be considered obscene"--. "including but not limited to, depictions of sadomasochism, homoeroticism, the sexual exploitation of children, or individuals engaged in sex acts . . . " In the absence of any legislative history, we are inclined to interpret this phrase as merely providing examples of depictions that "may be considered obscene" depending upon whether the particular depiction meets the three-prong Miller test. We find no indication that this language was intended to supersede the Miller test by listing categories of depictions that are to be regarded as per se obscene for purposes of section 304(a).

materials "may be considered obscene" does not preclude funding of the materials under section 304(a), however, unless NEA also determines under that section and the third prong of the Miller test that the materials, taken as a whole, have no serious artistic value.

As noted previously, determinations concerning the application of section 304(a) are committed to NEA's discretion. Only the NEA can determine that a violation has occurred. At the same time, NEA retains accountability for how its funds are used. This, in turn, requires the agency to adopt controls designed to prevent violations of section 304(a) in the first instance and to assure that it can remedy any violations that might occur. The remainder of this analysis addresses the legal sufficiency of the controls NEA has put in place to fulfill these responsibilities.

II. The Grant Making Process

The NEA's organic act authorizes the agency to award direct grants to groups and individuals and to make block grants to state arts agencies.14/ Such grants are to fund projects and productions "which have substantial artistic and cultural significance."15/

According to the NEA, the grant process differs depending on whether the award is being made to a state agency or directly to a group or individual. For state block grants, the panels review the applications for compliance with the organizational and procedural requirements that the organic act imposes upon state agencies. The NEA panels do not review the grants made by the state agencies to groups and individuals from the NEA block grants; these reviews are conducted by the state agencies. The language of section 304(a) is incorporated verbatim into the terms and conditions of fiscal year 1990 grants made to the state agencies, and this language is required to be included in the state agencies' grants from their allocations of 1990 NEA block grants.

Applications made by a group or an individual for direct NEA grants are reviewed by NEA panels for their artistic merit. The panel's recommendations are forwarded to the National Council for the Arts which then makes its own recommendation to the Endowment's Chairman. The Chairman makes the final determination whether to approve these grants. The NEA has adopted a number of procedures and controls in its grant making process designed to comply with section 304(a). According to the NEA, all panel members are personally briefed by the Chairman or a senior aide on the funding restrictions. If the panel believes that a grant application may involve questionable materials, it "red

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14/ See section 5 of the National Foundation on the Arts and Humanities Act of 1965, as amended, 20 U.S.C. § 954 (1988).

15/ See, e.g., 20 U.S.C. § 954(c)(1) and (4).

flags" the application and sends it to the General Counsel. If further review is necessary, the application is reviewed by the Chairman and the Council. Again, the language of section 304(a) is incorporated verbatim into the terms and conditions of all direct NEA fiscal year 1990 grants and any subgrants from those grants.

In our opinion, these controls are legally appropriate as a means of complying with section 304(a) and provide an orderly procedure for making determinations under that section.

III. Recovery of Misspent Grant Funds

While we believe that the controls NEA has installed in its grant award process are appropriate under section 304(a), obviously they cannot guarantee compliance. There are two inherent limitations on the grant award process. First, as noted previously, specific projects funded from state block grants are reviewed and approved at the state level. While we have no reason to think that the state agencies will not scrupulously apply the section 304(a) requirements in their reviews, only NEA has authority to make final determinations under section 304(a). Second, and more fundamentally, it may not be possible for any reviewer at the grant award stage to make definitive judgments about materials that have not yet been produced.

Recognizing that the mere grant award cannot immunize a final product or production from possible violation of section 304(a), NEA has properly included the statutory language as an express term and condition of every fiscal year 1990 grant and subgrant. This affords a specific contractual basis for enforcing section 304(a) in the event NEA determines that a violation has indeed occurred. The NEA may discover potential violations of section 304(a) in several ways, one of which is through its review of the final descriptive reports that all grant recipients, including state agencies, must submit to NEA.

If NEA determines that a violation of section 304(a) has occurred, the language of section 304(a) ("None of the funds . . . may be used . . . ") clearly requires NEA to seek recovery of the misspent funds. In this event, NEA's organic act, at 20 U.S.C. § 954(h), provides a remedy as follows:

> "Whenever the Chairperson, after reasonable notice and opportunity for hearing, finds that--
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> . . . . .
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> "(3) any funds granted to a group or State agency under this section have been diverted from

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16/ While 20 U.S.C. § 954(h) refers only to diversions of grant funds by a group or state agency, we believe it could be invoked as well in the case of a violation of section 304(a) by the recipient of an individual grant.

> the purposes for which they were allotted or paid, the Chairperson shall immediately notify the Secretary of the Treasury and the group or State agency with respect to which such finding was made that no further grants will be made under this section to such group or agency until . . . the diversion has been corrected, or, if compliance or correction is impossible, until such group or agency repays or arranges the repayment of the Federal funds which have been improperly diverted or expended."

Given the language of section 304(a) and the fact that it is incorporated into each grant, any violation of section 304(a) necessarily would constitute a diversion of grant funds within the application of 20 U.S.C. § 954(h).16/ If NEA found such a violation, after notice and opportunity for a hearing in accordance with section 954(h), the appropriate action would be recoupment. Unless the funds were repaid voluntarily, NEA would be required to suspend further grants to the grantee and pursue a money claim against the grantee under the procedures specified in the Claims Collection Act, 31 U.S.C. §§ 3701 et seq., and the implementing standards at 4 C.F.R. part 101 et seq.

IV. Conclusions and Recommendations

Based on the foregoing analysis, we conclude that the procedures and controls NEA has adopted are, on their face, legally sufficient to comply with section 304(a). Subject to the inherent limitations discussed previously that no pre-award review process could eliminate, NEA has established controls and procedures to make section 304(a) determinations in awarding 1990 grants. Further, inclusion of the language of section 304(a) in each fiscal year 1990 grant and subgrant, coupled with the provisions of 20 U.S.C. § 954(h), provides a basis for recovery of any funds that NEA later determines to have been used in violation of section 304(a). At the same time, we believe there are several potential problem areas with respect to section 304(a) in which NEA could enhance its efforts to implement the statute.

The first potential problem area relates to the standards NEA is to apply in determining what materials would violate the funding restrictions. Concerns have been raised that the language of section 304(a), particularly the phrase "may be considered obscene," is vague and may even be unconstitutional. We believe that NEA should respond to these concerns by formally issuing a policy statement that it will adhere to the three-prong obscenity test prescribed in Miller v. California, supra, when making its determinations under section 304(a). As discussed previously, we believe that Congress intended NEA to apply the Miller test, so that the funding restrictions extend only to materials that NEA determines to be obscene under Miller. Even if NEA concluded that it was not required to adopt the Miller test, it certainly could do so in the exercise of its discretion under section 304(a).

The second problem area concerns the application of section 304(a) to so-called "seasonal support grants." These grants generally are intended to defray operational expenses incurred by a grantee such as a theater over the course of its performance season. Typically, the grant can be used to fund expenses shown on the grantee's budget as submitted to NEA, such as salaries and wages, supplies, equipment, artists' fees, mortgage payments and insurance.

Seasonal support grants generally do not fund any specific project or performance directly, but arguably they contribute indirectly to every project or performance sponsored by the recipient.[17] The question that seasonal support grants present under section 304(a) is whether and to what extent such grant funds are used "to promote, disseminate, or produce" materials subject to its restrictions. While the relationship between the use of grant funds and the promotion, dissemination, or production of particular materials may be fairly clear in some cases, in other cases it may be too attenuated to permit application of section 304(a). The language of section 304(a) does not purport to subject all of a grant recipient's activities to the funding restrictions, and probably could not do so constitutionally. Cf., Federal Communications Commission v. League of Women Voters, 468 U.S. 364 (1984), in which the Supreme Court struck down a statutory provision forbidding recipients of Corporation for Public Broadcasting grants from using their own private funds to engage in editorializing.

We recognize that there are no easy solutions to the problem of applying section 304(a) to seasonal support grants. NEA has advised us that it will require certain grantees to provide it with information specifying how grant funds are to be used prior to actual release of the funds, and it has imposed this requirement for one recipient of a 1990 seasonal support grant, the Kitchen Theater. However, it appears necessary to have some method of identifying the circumstances under which the funding restriction in section 304(a) will attach to specific projects or performances sponsored by a seasonal support grant recipient. Again, this is an area where we believe NEA needs to develop formal guidance and procedures.

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[17] This problem is illustrated by the controversy surrounding the performance of Ms. Annie Sprinkle in January 1990 at the Kitchen Theater in New York City. Ms. Sprinkle claimed that her performance, which many persons considered to be obscene and pornographic, was federally funded. The Kitchen Theater did receive a fiscal year 1989 seasonal support grant covering the period of Ms. Sprinkle's performance. This grant was made for the purpose of defraying the Kitchen's operational expenses; however, according to NEA, all of the grant funds had been disbursed well before Ms. Sprinkle's performance. The current NEA Chairman has stated that Ms. Sprinkle's performance would not have been funded from fiscal year 1990 appropriations.

The third area relates to the difficulty of making definitive judgments concerning the application of section 304(a) at the time grants are awarded when, in most cases, the material to be funded by the grant does not yet exist. As discussed previously, the grantee necessarily remains subject to the restrictions of section 304(a) as the grant funds are used and would be required to repay the funds if NEA later determined that the funds had been used in violation of section 304(a). Therefore, we believe that NEA should consider adopting a procedure whereby grantees could, if they wished to do so, seek advisory opinions from NEA at post-award stages concerning whether potential uses of grant funds--for example, to support a particular performance--would, in NEA's judgment, violate section 304(a).

If NEA had sufficient information to express an opinion that the proposed use would not violate section 304(a), it could so advise the grantee and agree not to invoke section 304(a) later if the actual use of grant funds was consistent with the information on which NEA based its opinion. On the other hand, if NEA concluded that the proposed use would or might violate section 304(a), the grantee would be forewarned. We note that this approach is similar to the advance clearance process NEA has imposed on at least one seasonal support grant recipient. We think that all grantees should have the opportunity to seek such advance clearance.

GRANTS AWARD REVIEW

Chairman **Byrd**. How do you propose to impose greater review over changes to grants awarded by you in order to prevent situations where programs other than those for which the grant was originally awarded end up receiving funding?

Mr. **Frohnmayer**. Well, that would be a distressing situation if and when it happens, Senator. The grants, except for seasonal support, and operational support, are really fairly specific, and we require that if it is a substantial change, the grantee come back to us and inform us of that change and the nature of the change, and if it is necessary, we will take that grant back to the National Council or to the panel to consider the change.

If it is simply administrative, we can make it internally, but we do expect the grantees to do what they say they are going to do.

Chairman **Byrd**. Some House Members have proposed changes to the grant structure, and with a higher percentage of your total funds directed toward State-run programs. Others have criticized that approach. Hence, the proposal for a 1-year stay that we read about today.

What would you characterize as the advantages and disadvantages of placing more decisionmaking responsibility at the State and local levels?

Mr. **Frohnmayer**. Well, the advantage is that it is closer to the people that are actually getting the money. I suppose that the advantage from your standpoint, as far as Congress is concerned, is that unless you chose to keep oversight, the money is out of your hands and out of your hair.

But those are about the only advantages that I can see, and I think that the disadvantages outweigh that proposal by a very, very large degree. The disadvantages as I see them, and I do not favor the proposal incidentally, is that it would likely skew the moneys radically on the basis of population.

For example, a State such as Wyoming, might get 30 times per capita that which a State like New York or California might. I think it would multiply in many States and territories the administrative load of getting these grants.

One of the virtues of centralization is that there is one major grant-giving agency in the country, and we do it here in Washington. I think that the grants would be more subject to political pressures, because they are very much on the local level.

I think that States would be likely to cut back on the funding for the arts and that ultimately it would wind up being smaller. Many States are constitutionally balanced budget States, and I certainly have experienced this in Oregon. When the revenue projections go down, you start cutting budgets.

And if indeed the cut were to come in that kind of circumstance, you would really be doing a double cut, because you would be cutting both the Federal funds and the State funds.

In addition to that, there has been a wonderful sort of synergy that happens when money goes out from the Federal level and matched on the State level, and often is matched again on the local level.

If you cut one step out of that, then you cut out one of those matches of moneys, and the pot is necessarily smaller. The thing that I did not mention and is probably the most important, is Federal leadership: identifying the importance of folk arts, and identifying the importance of media, television, and radio, as a means of really disseminating the arts in this country.

And identifying the possibilities for really including in a meaningful way all of the cultural groups in our country, doing work in international studies, and in literature. All of those are programs which really have emanated from the Federal level because of Federal leadership. Because from a Federal level we can see the whole country and identify the exemplary programs around the country, as well as the holes, and try to fill them.

So, those are some of the reasons that I think that it is important that there be a national presence, and I really think that a proposal that would put a large percentage of the money out to the States would emasculate the Federal credits and ultimately fill them.

Chairman BYRD. What information can you provide to the committee regarding your fiscal year 1991 budget if it were restructed to encompass a 50-percent minimum for State programs?

Mr. FROHNMAYER. I'm sorry, but could you give me the question again?

Chairman BYRD. All right. If your fiscal year 1991 budget were restructed to encompass a 50-percent minimum for State programs, how would the allocations change for each State? What would be some of the other ramifications?

Mr. FROHNMAYER. Well, it depends upon how the legislation was written, Senator. If it was just take 50 percent and divide it by 50, and then send it out, then that would be mathematically pretty easy.

Chairman **Byrd**. Would you do it, even though it is easy, for the record?

Mr. **Frohnmayer**. Well, you know, if the budget were—well, let's just take round figures. If the budget were for $200 million, it would be $1 million divided by 50 for each State. I mean, that's high, and it is more than you are going to get, but the short of it would be that the States, like Wyoming, would get maybe three times what you get now, and States such as New York and California would get less, because they are more populated States.

And if you would like, we can actually calculate that out and submit it for the record.

Chairman **Byrd**. All right.

[The information follows:]

PROJECTION OF FORMULA GRANTS BASED ON 50 PERCENT OF PROGRAM FUNDS TO STATES

Table A projects the grants which state arts agencies would receive if 50 percent of program funds ($62.900 million at the fiscal year 1991 congressional request level) were apportioned among the states according to the current formula. Under the current formula each of the 56 states and jurisdictions is allotted $200,000; then one-eighth of funds available for formula distribution are apportioned among the states according to population and one-eighth are set aside to be allotted to regional groups of state arts agencies in equal shares per member state. Any funds remaining after these steps are completed are apportioned equally among the 52 states and jurisdictions with populations over 200,000.

The first column of numbers on table A gives the state populations according to Census Bureau estimates for 1987. The second column gives each state's share of $7.862 million that would be available for distribution on the basis of population if 50 percent of NEA program funds were awarded through the formula. The third column shows the total funding that would be distributed in equal shares, including an equal allotment of $200,000 for each of the 56 states and jurisdictions and an equal share of $691,827 for each of the 52 with populations over 200,000. The population share and the equal share are added together to give the projected Basic State Grant, shown in the fourth column. Also included for purposes of comparison are the fiscal year 1990 Basic State Grants, which reflect the distribution of 20 percent of program funds to the states.

TABLE A.—OPTION 12: 50 PERCENT OF PROGRAM FUNDS DISTRIBUTED BY CURRENT FORMULA

	Total population	Population share	Equal share	Projected grant	Fiscal year 1990 basic State grant
Alabama	$4,084	$129,781	$891,827	$1,022,000	$390,000
Alaska	526	16,715	891,827	909,000	349,000
Arizona	3,384	107,537	891,827	999,000	383,000
Arkansas	2,388	75,886	891,827	968,000	371,000
California	27,663	879,074	891,827	1,771,000	669,000
Colorado	3,296	104,740	891,827	997,000	381,000
Connecticut	3,212	102,071	891,827	994,000	380,000
Delaware	644	20,465	891,827	912,000	351,000
District of Columbia	622	19,766	891,827	912,000	350,000
Florida	12,024	382,098	891,827	1,247,000	485,000
Georgia	6,222	197,723	891,827	1,090,000	416,000
Hawaii	1,083	34,416	891,827	926,000	356,000
Idaho	999	31,746	891,827	924,000	355,000
Illinois	11,583	368,084	891,827	1,260,000	477,000
Indiana	5,531	175,764	891,827	1,068,000	407,000
Iowa	2,835	90,091	891,827	982,000	376,000

TABLE A.—OPTION 12: 50 PERCENT OF PROGRAM FUNDS DISTRIBUTED BY CURRENT FORMULA—Continued

	Total population	Population share	Equal share	Projected grant	Fiscal year 1990 basic State grant
Kansas	2,476	78,682	891,827	971,000	372,000
Kentucky	3,727	118,437	891,827	1,010,000	386,000
Louisiana	4,461	141,762	891,827	1,034,000	394,000
Maine	1,187	37,720	891,827	930,000	357,000
Maryland	4,534	144,081	891,827	1,036,000	396,000
Massachusetts	5,856	186,092	891,827	1,078,000	411,000
Michigan	9,200	292,357	891,827	1,184,000	449,000
Minnesota	4,246	134,929	891,827	1,027,000	393,000
Mississippi	2,624	83,385	891,827	975,000	373,000
Missouri	5,103	162,163	891,827	1,054,000	402,000
Montana	809	25,708	891,827	918,000	352,000
Nebraska	1,595	50,686	891,827	943,000	361,000
Nevada	1,007	32,000	891,827	924,000	355,000
New Hampshire	1,057	33,589	891,827	925,000	356,000
New Jersey	7,672	243,801	891,827	1,136,000	432,000
New Mexico	1,500	47,667	891,827	939,000	360,000
New York	17,826	566,474	891,827	1,458,000	549,000
North Carolina	6,412	203,760	891,827	1,096,000	418,000
North Dakota	672	21,355	891,827	913,000	351,000
Ohio	10,784	342,694	891,827	1,235,000	468,000
Oklahoma	3,273	104,009	891,827	996,000	380,000
Oregon	2,724	86,563	891,827	978,000	375,000
Pennsylvania	11,937	379,334	891,827	1,271,000	481,000
Puerto Rico	3,720	118,214	891,827	1,010,000	381,000
Rhode Island	986	31,333	891,827	923,000	354,000
South Carolina	3,423	108,776	891,827	1,001,000	383,000
South Dakota	709	22,531	891,827	914,000	351,000
Tennessee	4,855	154,282	891,827	1,046,000	399,000
Texas	16,785	533,393	891,827	1,425,000	537,000
Utah	1,680	53,387	891,827	945,000	363,000
Vermont	548	17,414	891,827	909,000	349,000
Virginia	5,904	187,617	891,827	1,079,000	412,000
Washington	4,539	144,240	891,827	1,036,000	397,000
West Virginia	1,898	60,315	891,827	952,000	365,000
Wisconsin	4,807	152,757	891,827	1,045,000	399,000
Wyoming	490	15,571	891,827	907,000	349,000
American Samoa	35	1,112	200,000	201,000	200,000
Guam	120	3,813	200,000	204,000	201,000
N. Marianas	19	604	200,000	201,000	200,000
Virgin Islands	108	3,432	200,000	203,000	201,000
Total	247,404	7,862,000	47,175,004	55,040,000	21,508,000

PRESIDENTIAL DIRECTION

Chairman **Byrd**. Earlier this spring, the President endorsed your leadership and stated his preference for a NEA free of legislatively imposed content constraints. Yet, he expressed offense, quote, at some of the filth into which Federal money has gone, close-quote.

You have already addressed a response to this question to some extent, but I will ask you how do you propose to carry out the President's direction? What specifically can be done to prevent such filth?

Mr. **Frohnmayer**. Senator, in addition to the things that I have told you about, it seems to me that we have an obligation to look at not just the artistic significance of a particular work of art, but whether it moves the field forward, and if it is extremely controversial, whether it is controversial in such a way that it will encourage a meaningful dialog.

I think that ultimately we have to look at how we can promote the arts in this country in such a way that we really capture the American people into knowing that the arts are important. I would say to you that I think over the years the Arts Endowment has done a wonderful job of some things, and the thing that we have not done a wonderful job of, at least in the last dozen or so years, is keeping up our constituencies.

And I am talking about yourselves, and I am talking about the people as a whole in this country, because I believe that if you don't believe in us, and if the American people don't believe in us, then no matter how much good work we do, and it is very substantial, then what we are going to have to answer for is those 20 grants, or those 20 photos.

And I don't intend to spend my time here having to answer these kinds of questions, when what I came here to do was to promote the arts of this country and that is what I really want to do.

Chairman **Byrd**. Mr. Frohnmayer, you are the President's Chairman. Many of us would like to give you an opportunity to exert your leadership. But let there be no misunderstanding. I, and others, will not tolerate indiscretions as we have seen recently.

If Congress is unable to achieve resolution to these issues, why should taxpayer's dollars support the arts? That is a rhetorical question and I think that many of us feel very strongly about these issues, and you probably feel the same way.

Mr. **Frohnmayer**. I do.

Chairman **Byrd**. I can understand the difficulties that confront you and in your efforts to determine and make the decisions that will rightly guide the appropriate spending of the taxpayers moneys.

Mr. **Frohnmayer**. I believe, Senator, that it can be done, and I have every intention of taking whatever steps are necessary to do it.

Chairman **Byrd**. I don't think there is a member on this committee who believes in censorship, but neither do we believe that some of the things that we have seen represent our constituents.

There are those of us, myself included, who want to see this program continued, and not censorship in any form, but also no taxpayer subsidizing. Taxpayers don't or shouldn't have to subsidize this kind of so-called art.

If the private sector wishes to subsidize it, then let the private sector do it. If there is no other way than censorship, then it seems to me let the private sector do it, and in that way we don't censor, and there isn't censorship, and those who wish to throw away their money on that kind of filth may do so.

There are those of us who want to see this program and this effort continue and the appropriations continue, but we also want to see something done about the concerns of our taxpayers. I guess in many instances it comes down to a matter of judgment, and I certainly don't envy your position and your situation. I have a feeling based on my personal conversations with you that you are trying to do the best that you can, and what we are searching for is assurance that you are going to do, or we are all going to do better.

Mr. **Frohnmayer**. I can give you that assurance, Senator. We have talked and I would reiterate to you as I think I have told you in private that I think I am sensitive to these issues. I do have a degree in Christian ethics, and I am sensitive to that area. I believe so strongly that the arts contribute so much to this country that it would be, in my view, a tremendous tragedy if Congress were to not fund this agency, or to radically change it so that it can't fulfill its mission.

And I pledge to you that we will find a solution through the work of the independent commission and through our own work, to the end that the Agency can be a real feather in the cap of both Congress and the American people.

Chairman **Byrd**. Senator McClure.

Senator **McClure**. Thank you very much, and I want to thank both you, Mr. Chairman, and you, Mr. Frohnmayer, for the exchange that you just had. That is very much the concern in the areas of controversy, and in ways that it does not make sense. I am a little bit constrained, and I will try to be careful as I make these comments, because I don't mean to be flippant at all.

But I suspect that there are a number of people who suspect your ability to make judgments just because you have a degree—because they don't want you to apply that to judgment making, and I think I understand some of the reasons why they might make a comment like that, because I think that could get into the way of decisions for some grants that others might desire.

I suspect that you and I share much of the same kind of ethical values that we would like to see applied, and we have to do that in a way that is both sensitive and appropriate in our multiple society. We have ethnic varieties in this country, and we have diversity, and I think that is the greatest strength of our country.

But I also think that we shouldn't, just because of diversity, abandon our values—and that is what we are struggling for. I do have a number of questions and I will go through them about as fast as I can.

Chairman **Byrd**. Would you let me interrupt for a second?

Senator **McClure**. Of course.

Chairman **Byrd**. Well, having ethnic diversity in this country is not something new. We have always had ethnic diversity, and when I say always, perhaps not as much as we did at the very beginning, and even with that ethnic diversity, we have had values, and some of the things that we have seen happen, although they are minimal as to the number of instances or the percentages as a whole, are so repulsive that it makes our job very difficult. We are faced with some problems, and we feel in our hearts that something needs to be done, and that is what we are here for.

We are reaching a crisis. I don't disagree with what you said, but the American people didn't see on television the photographs that Jesse Helms had there. They saw the flowers, and the other pictures that were displayed on television.

They didn't see what we saw. I didn't see it all, but had that—and I am not suggesting that television ought to show it either, but had that been seen I feel that the criticism that we have heard would be nothing compared to what we would have heard.

So, I guess what I am saying is that we all have to work together and kind of clean up our act, because if the American people ever really see what was there, ever really see that, there won't be any judgments left, and funds would no longer be made available.

And so I am not here to criticize you, but I am trying to tell you that I empathize with you and say that I have problems, too. Each of us has problems. We want to see this money is spent for purposes that you and I, and all the others, you know, what is America for.

It is too bad that a few little rotten apples have to be involved and spoil a barrel, but they will do it. Surely as I am sitting here they will do it, won't they?

Mr. FROHNMAYER. Well, we certainly have had——

Chairman BYRD. I am sorry that I am taking up your time.

Mr. FROHNMAYER [continuing]. Our share of problems.

Senator MCCLURE. Mr. Chairman, I agree with what you are saying, and it stimulates another comment, and I am like you. I hope that the television stations don't broadcast those pictures, and I hope the newspapers and the news magazines and the commentary people don't publish all the portfolios.

I will say this. Those who have criticized the Helms amendment, without knowing what those pictures were, and what the exhibits were, do a disservice to public information with respect to what it is that we are wrestling with, and I don't want them broadcast, but they have a duty to know what they are talking about, and if they really believe that those pictures are appropriate, then why don't they broadcast and publish them?

Mr. FROHNMAYER. Senator, the only thing that I would say about this is that—and I think that this is the 409th day of the Serrano-Mapplethorpe crisis. [Laughter.]

And in the last session, Congress passed the fiscal year 1990 appropriation and deducted $45,000 from the Arts Endowment budget. I would simply hope that we could put Mapplethorpe and Serrano behind us, because we have really bloodied all of ourselves with those two grants, and my desire is to move forward.

Senator MCCLURE. I agree with you totally, but what we are discussing here today is against a backdrop of a schedule in which the American people have not been given accurate information, but they make judgments.

And that makes your job tougher, and it makes our jobs tougher, and I agree with Senator Byrd that if the American public had seen what we were not privileged to see, but did, they would have made a judgment already and you wouldn't be here talking about whether there should be a 5-year reauthorization, or a 1-year reauthorization.

And that is why I said on the floor of the Senate during the debate that I am angry, and I am angry. I am angry at those people who are so blind that they cannot see what they are doing to the public support for the arts, because I want to support the arts, and I want to be able to continue to do that.

And I want this committee to support the arts, and I want it to be able to continue to do that. I want this Senate and Congress as a whole to be able with a clear conscience to say to the American public your money is going to be well spent on things that we think are important, and we can't afford the distractions of minor, of very, very minor problems that creep into the grant process.

I agree thoroughly and totally with people who say that the great majority of the grants are without exception, and acceptable, and most of us would be proud of nearly everything that you have done and your agency has done, but I find a few people around who say those weren't rotten apples in that barrel, or another group who will say it a slightly different way, that it is none of your business whether we put rotten apples in the barrel.

It is your duty to provide them for us, and we will decide how it is done.

Mr. **Frohnmayer**. And I would never say that, Senator. I absolutely believe that the Congress has the right and duty of oversight.

Senator **McClure**. I appreciate that, but there are many people out there in the arts community that you and I try to communicate with who are saying exactly the opposite. Congress, it is none of your business. That is censorship. I can't state too strongly that as long as that attitude is out there, there are going to continue to be the problems that we don't want, and that the committee doesn't want.

I don't like to have to spend our time with this sort of thing. I would rather have a 15-minute hearing, and saying, well, you are doing great, and there are no problems, and here is some more money.

Mr. **Frohnmayer**. Sounds pretty good to me. [Laughter.]

Senator **McClure**. And here we are, as you said, on the 410th day of the controversy that won't go away, and I just wish there were a few people out there who would say, like you, let's get that behind us. They don't want to. They keep saying Congress is wrong, and Congress has no right to look at it.

And if they want to keep the argument going, just keep on saying that, because Congress will respond to that, like they have in the past.

Mr. Chairman, you mentioned the commission that was established as a result of the language in last year's bill, and it just has been established, and you suggested that we should perhaps give it time to work.

Now, I want to ask a couple of questions in that regard. Why did it take so long to establish the committee?

Mr. **Frohnmayer**. I don't know, Senator. I know that the House names were announced before Christmas, and the Senate names were announced in January, but I guess they did not get into clearance—I don't know if it was a transmission problem or what—for some period of time. I am told that the clearance process took a long time, partly because those things take a long time, and partly because there was some slow submissions of the personal data.

But for whatever reason, it was not cleared until quite recently, and the first meeting is going on right now.

Senator **McClure**. Well, if I recall the language correctly, that commission had 180 days from the date of enactment to report.

Mr. **Frohnmayer**. That's right.

Senator **McClure**. And most of that time has been used.

Mr. **Frohnmayer**. No; it is already gone. April 23 was the date.

Senator **McClure**. So, what are we to do now?

Mr. **Frohnmayer**. Well, the Commission stays in effect through the fiscal year.

Senator **McClure**. They are already in violation of the law with respect to the report though.

Mr. **Frohnmayer**. True. I would hope that this committee and the House and Senate would see fit to extend the life of the Commission. I really think that it is a valuable tool; not just because it is a deliberative body that can take the time, which you don't have, to really look at this issue carefully, but there is a great deal of expertise on that Commission, it is widely representative of viewpoints, and political parties.

And I think that another valuable characteristic of the Commission is that hopefully it will allow the temperature to go down on this dispute. I mean, most of the press that is here today would not even think of coming to this kind of a hearing in other times. I think that it is appropriate for all of us to try and turn the temperature down, and get this on a rational plane to really solve the problem.

Senator **McClure**. With reference to the press, and they are certainly welcome, and this is a public issue, and there is a public debate in the Senate on it, but I am reminded of a comment made by a gentleman who is being ridden out of town on a rail after having been tarred and feathered, who said that if it was not for the honor of the occasion I would just as soon walk. [Laughter.]

I suspect that you feel somewhat the same way.

Mr. **Frohnmayer**. Well, the gentile quiet of the courtroom looks pretty good sometimes. [Laughter.]

Senator **McClure**. Let me inquire a little bit, because I think it is important for us to establish a record with respect to what it is that we are trying to achieve, you and us together, and one of these issues lies in the question of how do we perform our oversight function, and how do we give you guidelines which enable you and allow you, and require you to operate in a way that will continue to have you report to Congress.

And one of the great controversies that has come up and has shrouded this whole thing is a question of first amendment rights, and I think we have to establish a little bit what that is in this field.

Is it your understanding that the first amendment guarantees the freedom of expression and is applied to commercial speech? For instance, the advertising of a product?

Mr. **Frohnmayer**. Yes; but there was a case last year, Senator, that made some distinctions between commercial speech and other kinds of speech.

Senator **McClure**. Is it your understanding that the first amendment guarantees the freedom of expression and applies to religious speech, for instance, and the advocacy of religious doctrine?

Mr. **Frohnmayer**. Yes; absolutely. That is the nonestablishment clause. I'm sorry; the free exercise clause.

Senator **McClure**. Is it your understanding that the first amendment guarantees the freedom of expression and applies to a political speech; for instance, in the advocacy of a particular candidate for office?

Mr. FROHNMAYER. Yes.

Senator McCLURE. Then would you consider it proper for the Federal Government to fund an art project that is part of an advertising campaign for a particular product, or which is a profitization for a particular religious sect, or is part of a particular political campaign, even if the art project had the approval of a national, State, or local review panel?

Mr. FROHNMAYER. It is a tough question in the abstract, and generally my answer would be, no. If it were commercial, first of all, it would not fit within our guidelines because nonprofit organizations are the only thing that we fund. If it were specifically added just for a political candidate or cause, then I think that would tend to override the artistic merits if there were any, and would not be funded.

And in terms of religion, we do fund grants which have religious subjects, but that cannot be the primary purpose of the activity.

Senator McCLURE. Then I think you have expressed that it is improper for the Government to fund some forms of artistic expression even though they are protected by the first amendment?

Mr. FROHNMAYER. Well, certainly the inquiry whether we do at the Arts Endowment is not just whether it is legal. I mean, our inquiry would go beyond that, to address significant questions about whether it is artistically significant and whether we are furthering the goals of the agency in doing so.

Senator McCLURE. Is there any circumstance in which the failure of Government to pay for a particular art project amounts to censorship?

Mr. FROHNMAYER. Yes; I believe that the way the first amendment law works on that is that if there is a categorical—according to subject—limitation, saying that you can't do this, then there are potential first amendment problems.

If the determination is made on the artistic quality, then there are not first amendment problems.

Senator McCLURE. But you don't make all of your decisions on the basis of artistic quality, nor do you make all of your decisions without reference to things other than artistic quality?

Mr. FROHNMAYER. Well, certainly the primary criteria is artistic quality, but we also look at different things in the different program guidelines.

Senator McCLURE. Your failure to fund some of those is charged by some as being censorship.

Mr. FROHNMAYER. Well, that's wrong.

Senator McCLURE. Do you see a distinction between barring the publication or production of a work of art, and refraining from paying for that art?

Mr. FROHNMAYER. Well, again, it depends. I think that the barring of the production has very definite first amendment implications. The failure to pay for it depends on why. If it does not compete well with the other grants, then I see no first amendment problems in that regard, and that is the process that we go through every session, because we get 18,000 grants and we fund 4,500 of them.

Senator McClure. Well, we are very careful, and we ought to be very careful about limitations on the expression guaranteed in the Bill of Rights, and yet, in spite of what Justice Hugo Black used to say, there are limitations. Justice Oliver Wendell Holmes said that the right to freedom of speech does not extend to the right to cry fire in a crowded theater.

And we had yesterday or the day before yesterday, votes on the floor—I had better amend that, because time has passed. I had votes with respect to the right to keep and bear arms. What does that provision mean? Is it an unlimited and unrestricted, and absolute right? The Congress of the United States agrees with the courts that it is not.

There are certain circumstances and certain applications where the Congress and the courts are willing to say that the exercise of that right is not an absolute, and I agree with that. We have in many respects over the years tried to confine those dollars, and you can go through the litany of the rights of freedom of expression and religion. It is not an unrestricted right.

I can't imagine anybody deciding that it would be right for some of these people who in the name of their own religion engage in the mutilation of animals, for example. Society steps in and says, hey, that is an inappropriate expression of a religious belief, no matter what you think about it.

We are constantly involved in that sort of thing, and it seems to me that we are confronted here by some people who in the name of freedom of expression want to require you to set aside any judgment and call any exercise of such judgment censorship.

Now, obviously you don't agree with that, and I don't agree with that, but somehow we have to get that message out to the public as well. These are not absolute rights, even though some artist may feel that you have denied him his rights of expression if you don't pay for his art.

Mr. Frohnmayer. Well, I think it is a continuum, Senator, with absolute freedom or license on the one hand, and responsibility on the other hand. I think what we are all searching for is how to identify where on that continuum we fall, and those are tough questions.

They are questions which go really to the heart of what our society is about. My only plea here is that these questions are so significant, that we ought not to act without knowing exactly what it is we are doing, and that is one of the reasons that I think that the Commission is a significant vehicle for us all.

Senator McClure. Well, if I recall correctly, and I hope that these figures are correct, during fiscal year 1989 the NEA received 17,879 applications for funding. Of those, the Endowment approved 4,372, and rejected 13,507. If an artist's application for a grant is rejected by a review panel and is denied Federal funding, does that in your view constitute censorship?

Mr. Frohnmayer. No.

Senator McClure. Were any of those proposals of the 13,507 that were rejected, were any of them rejected for being utterly without artistic merit?

Mr. Frohnmayer. I don't know, because that happened before I got here, but I would suggest to you that probably all of them were rejected because in a competitive—in a very competitive atmosphere—they simply did not reach the artistic quality of those that were funded.

Senator **McClure**. I wonder if you could make inquiry and find—if it is relatively and easily available, and I don't want you to conduct a massive search through your staff and try to resurrect either memory or records, but I wonder if you could inquire as to whether any of them were rejected for being utterly without artistic merit.

Mr. **Frohnmayer**. I would say, however, that I would doubt that such a judgment was made. The panels try very hard, I believe, to be helpful to applicants who are not funded, in order that they might through the experience of having applied, improve whatever it is that they are doing.

So, it is hopefully a much more positive process than a negative one.

Senator **McClure**. An article that appeared in the May 2, 1990, edition of the Washington Post indicated that you believed that the language in the fiscal year 1990 bill and conference report is unconstitutional. Is this story accurate?

Mr. **Frohnmayer**. I believe that there are constitutional problems, and it seems to me that if it is interpreted as meaning *Miller* v. *California,* which is the leading U.S. Supreme Court case, and subsequent cases, then clearly that is constitutional, because that is the law of the land.

The problem constitutionally that I think exists with the current legislation is that it includes things which are not necessarily obscene, per se. For example, people engaged in a sex act can be portrayed in such a way that it is not obscene, and therefore, there is the potential prior restraint there.

The second problem that I would identify is that it puts into the executive branch determinations which are more properly judicial, and therefore, there is a question of separation of power. My legal counsel is here today, and if you want a more complete answer, I would ask my lawyer.

Senator **McClure**. Well, if you would like to supply a more complete answer for the record, I would invite you to do that, because I think that this gets very close to the heart of the discussion with which there are several different problems.

You had indicated earlier, however, that you didn't think that your judgment should be guided simply on the basis of whether it is legal or not.

Mr. **Frohnmayer**. That is correct. That is absolutely correct.

Senator **McClure**. Then it seems to me that the answer that you just now gave is slightly different than that earlier response, and if it is not, I want you to explain.

Mr. **Frohnmayer**. Well, it is not intended to be. The fact that it is legal or not legal is only the entry inquiry as far as the Arts Endowment is concerned. Obviously, we are not going to fund anything that is obscene, but that doesn't mean that we are going to fund everything that is not obscene.

Senator **McClure**. Well, it seems to me that the Helms amendment, which some people revile, is at the same time said by some people to be nothing more than an expression of the current law, and if it is indeed an expression of the current law, then there is no reason for anyone to revile it is there?

Mr. **Frohnmayer**. Well, I would reference the GAO investigation, which was just released today, and that is indeed their conclusion about the fiscal year 1990 legislation. I assume that is what you are talking about when you say the Helms amendment.

Senator **McClure**. Yes.

Mr. **Frohnmayer**. We have so interpreted it as *Miller* v. *California*. Indeed we have indicated that to some grantees who have inquired. That is the position, and that is how we intend to interpret it, failing somebody telling us that we have to do differently.

But I think the question that you are getting at, and which is of great significance to me, is does it go beyond whether something is or isn't obscene. In my view, just because it isn't obscene, doesn't mean that we automatically fund it.

That is the reason that we have these panels: to try to select the very best art. That is the reason that we go through this rigorous process of having our program directors discuss these grants with us, and that is the reason that the National Council reviews them before I make the decision.

Senator **McClure**. Well, I guess I would differ with you a little, and perhaps before we get into a legal dilemma, because it seems to me that Congress is trying to say to you something different than that; and that just because it is not obscene under the Federal statute doesn't mean that you are obligated to fund it, even on an obscenity standard.

Mr. **Frohnmayer**. Well, I think that we understand that, Senator. If we have a difference, it just is not coming through to me.

Senator **McClure**. All right. That is the reason that I wanted to ask these questions, because I wanted to understand how you view it, because it seems to me that Congress is saying there may be some things which are legal to do, but we still don't want taxpayer's money put into it, and we don't want the taxpayer's money put into it because we think that it is an improper expenditure of the taxpayer's money.

Now, obscenity is one of those tests in my mind, and there may well be some piece that an artist could expose to the public, and could produce and disseminate, and distribute, which would meet the obscenities standard under the Federal statutes with respect to obscenity, but still not be appropriate for the Federal taxpayer's money to go into it for dissemination.

And we are trying to find that way in which we say to you that there are some things out there which may be legal, but we don't want you doing them, such as the dissemination of religious material, and the campaigning for a particular political candidate. I don't know how you would do this, but nevertheless, I think one thing that is there for you to try to exercise judgment upon is the expression of political ideas that artists use.

But it may not be an appropriate expenditure of Federal funds to produce and disseminate a, quote, purely, or ostensibly, or blatantly political document, even though it is done in the form of art.

I know that some of my political ads have been artistic beyond question. [Laughter.]

And I have yet to ask you to pay for those ads, and since I am not running again, I never shall. But I suspect that there may be some around here that are thinking, ah-hah, there are no holds barred and we will submit the application. Well, you won't fight on that, and you shouldn't, because you know that you would not under any circumstances get involved in that kind of a political expression in a partisan sense.

It is a much more difficult question when you get down to the issue of a political point of view, and I don't know how you do that, and again I know that you have to try, and if you transgress, somebody is going to say to you that you did; and if you don't transgress, then somebody will say that you should have.

Mr. **Frohnmayer**. One thing that is absolutely certain, I have found, is that there will be criticism no matter what is done.

Senator **McClure**. Well, I am sure that is true, but there are in the current criticisms a number of issues that deal squarely with questions of social issues in a political context. You can't separate social issues from a political context in our country, and yet it seems to me that is what some people are getting mixed up about, in terms of your actions, because they have a social statement that they wish to make, and art is the means of that expression, and they want you to fund it.

And if it has artistic merit, they expect you to fund it, even though it is social commentary. I don't know how you stop that. A lot of the greatest photography in the 1930's was social commentary, and yet the public didn't say then and it does not now object, but I think you understand what I am talking about, don't you?

Mr. **Frohnmayer**. Yes; I do.

Senator **McClure**. I have a number of other questions that I wish to submit for a response, in particular with respect to arts in rural areas, which is a very important part of it, and I want to give you a particular thank you for something that has been very important and which you mentioned earlier—Salmon, ID.

There was a publication of the River of No Return, in Salmon, ID, and the book was written by the students of Salmon, and it contains hundreds of poems written by the students. At the year-end poetry recitation, the school auditorium was filled to overflowing, and hundreds of parents stood in the corridors and halls to listen to their children read their work.

And the impetus for that effort was a year-long endowment residency by two gifted poet teachers, and it was a great success, and a great demonstration of the value of these kinds of programs and the kind of thing that had never been done before, and probably perhaps would never have been done in Salmon, ID, without the stimulation of the Endowment.

And it is those things that we want to be able to hold up before the public and say—here is a shining example of what we can do, and do nearly all the time, rather than have to spend so much of our time worrying about a very small fraction of the Endowment activities.

Mr. **Frohnmayer**. I will tell you that there are two other things about Salmon which you probably already know, Senator, and that is that Cheryl Noethe was one of the artists that helped those children. I think that she found as much benefit herself from having been in Salmon, and indeed considers herself a resident of Salmon now.

Senator McCLURE. Well, that is her gain, and ours, too.

Mr. FROHNMAYER. That's right. The other thing is that Pamela South, who was one of the divas who appeared here at the Kennedy Center—is from Salmon, ID.

Senator McCLURE. Well, you find talent and artistic merit in some very surprising places. I remember a number of years ago, and I can't tell you now who the critic was who expressed total amazement, that the best critique of Homer's "Iliad" that he had ever read was that written by a Basque sheepherder, reading from the original.

And you don't know where that is going to happen, but certainly we should recognize it and stimulate and enhance it where it can and does happen.

Mr. FROHNMAYER. You know, this can go both ways, because Pamela South told me that she sings cowboy songs to the other people in the opera cast.

Senator McCLURE. Again, they will benefit, I hope. [Laughter.]

Thank you, Mr. Chairman.

Chairman BYRD. Thank you. I know that you have been criticized for including the language that was in the Interior conference report to the applicants, and you have been criticized for that, and you sent to me a letter that one of them wrote to you, in which he wrote that this was an infringement on his constitutional rights, and that this was censorship, and something to that extent.

And in my postscript I said to let him get his money elsewhere, and let him get it from the private sector, and then he can do anything that he wants. I think that—I can't stress to you and the art community enough the seriousness with which Congress is grappling with these recent controversies.

The arts play a very vital role in our society. I don't believe that anyone has as their objective a diminution of that importance to the fabric of our society, but the working men and women, and when I say working men and women, I am talking about those who push pencils as well, the business people of this country, and the taxpayers, and the coal miners, who press the accelerator of that mining machine, and the farmer who puts his hand to the plow.

And the driver of that dog team in the frozen territory of the Arctic, and the fishermen, and these are all taxpayers, and they won't sit idly by and allow the abuse of their hard-earned dollars. Just as the public cried out against $600 toilet seats at the Pentagon, so too have they objected to some of these so-called works of art.

So, I think it is incumbent upon us, those of us who represent these people, to take every step possible to ensure that their tax dollars are being spent for art and not for filth, to use the President's term.

I hope that what I have said here—and it is in the spirit of understanding and in an effort to convey to you that we appreciate the problems that confront you, and as you read those letters it kind of puts you in the middle, but we all have a responsibility to you, and we will take every possible step that is within our power to act responsibly. I want to promote the arts.

Mr. **Frohnmayer**. Me, too.

Chairman **Byrd**. And I want to promote the development of artistic talent, and it seems to me that there is a kind of a common denominator that all of us understand, and that sensitizes us to what we know in our minds and in our hearts is just not something that is worthy of being subsidized by the taxpayers.

It is not something that the taxpayers want, and not something that they will stand for, and not something that we will support or that they will support. So, having said that, let me urge you to reconcentrate yourself to the task you have assumed, and I think you have to bend over backwards to do what you can for people and their support.

We cannot expect their continued support if we split hairs, and perhaps in a year or so they won't like it, and perhaps the whole arts community won't like it, but if we are going to continue to support the Endowment with Federal moneys, we have to keep our eyes and ears on those people back home. I can't avoid it, and I know that in your heart you feel the same way.

Senator **McClure**. Mr. Chairman, there are two issues that I would like to at least mention.

Chairman **Byrd**. Yes.

Senator **McClure**. And I didn't bring them up, and I deliberately did not bring them up, and one was so recent that I had no way of analyzing or even knowing how to ask questions, and that is on the GAO report. I hope that it was a proper analysis of some of the past activities and maybe put some of those to rest. If it was less than that, then it did not meet its purpose.

The other is a personnel question, with respect to Dr. Felzenberg, and I did not think that this was the appropriate time to go into that question, and chose not to do so, and I am also only very recently aware of that situation and whether there was anything going on in that regard, and so I did not ask questions about that.

I just wanted to let people know that it was not because we don't know about those things that questions were not raised on those subjects here today.

Chairman **Byrd**. I believe that was the item that you asked to be included in the record.

Mr. **Frohnmayer**. The GAO report? Yes.

Chairman **Byrd**. Yes; I did not at that point say that it would be, and without objection it will be included in the record.

Well, let's hope that in the future things will be better. I want to support the funding, but I have no compulsions about saying that I do not support Federal funding on some of the so-called art work that we have discussed, and that has been the subject of national discussion.

And I hope that we can find a way to get those moneys without this being repetitive. I also do not have any compulsions whatsoever about voting not to fund this program at all if we are going to continue to have these problems.

I am just one, but I don't think that I am alone, and I want to continue to give it some options, but I will say to you and I don't want you to take this personally, but there has to be a better job done, because we are going to have a repetition of this from all of the would-be applicants, and you don't want to see that, and I don't want to see that.

My purpose in saying this, in saying what I said is not to attempt to talk you down, or to be scolding. I am simply voicing the concerns that I think you won't know about unless I say it, and the arts community won't know about it unless it is said here.

ADDITIONAL COMMITTEE QUESTIONS

Now, I have tried to say it in a way that will not be taken as a lecture. I would not be fair to you if I did not try to impress upon you the seriousness with which some people around here other than Jesse Helms view this, and I thank you for your testimony, and I think you are trying to do a good job, and I know that there are many forces that are pulling you in many directions. Thank you.

There will be some additional questions which will be submitted for your response in the record.

[The following questions were not asked at the hearing, but were submitted to the Endowment for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

QUESTION: Are there any statutory prohibitions against some of the possible reforms identified in your testimony?

ANSWER: No.

QUESTION: What process do you have in place for analysis and evaluation of the suggestions?

ANSWER: Following preliminary discussions with senior members of the Chairman's staff, the current process is to use task forces of Endowment staff to evaluate ideas and suggestions. Each task force has a leader who reports to the Deputy Chairman for Programs, Partnership or the Deputy Chairman for Management as appropriate. We then select the people who have good analytical skills and those who are most knowledgeable of a particular concept or subject. To the extent practical we include representation by those who will have responsibility for the implementation of the proposal.

The product from the task force is usually a report or issue paper that describes the background information, who requested the evaluation, members of the task force, issues/problems, recommendations and any other relevant documents or references.

QUESTION: What cost analysis have you done to these options?

ANSWER: For most of the modifications to the panel process that required further study, the added cost was primarily with salaries and benefits for additional staff. In our original FY 91 budget, we submitted a request for three additional FTE at an approximate cost of $96,000. This request was based upon known requirements for processing additional applications in three discipline areas. However, with the additional demands and workload placed on the agency during the past year, we are requesting an additional 5 FTE in FY 91 for a total of 8 FTE at a cost of $296,000.

QUESTION: What funding does your budget contain to allow you to proceed with implementation?

ANSWER: The primary area affected by the changes proposed in my testimony is the panel process. Our FY 91 Administrative Budget Request reflects an increase for panelist activities and this request is adequate to accommodate the proposed improvements such as: selecting panelists for ethnic, professional and geographic distribution; increasing the size and duration of certain panels; and bringing panel chairman to National Council on the Arts meetings. We also proposed bringing Council members to various panel meetings which will result in increased travel costs for the Council. Assuming there are no major cost increases for FY 91 and we are not subjected to a sequester, we should be able to absorb the increased Council travel cost within the current Administrative Budget Request. Additionally, we are adding lay persons to existing panels without significantly increasing panel costs in FY 91.

You have discussed the potential role to be played in the review and audit of NEA grants by your Inspector General. As I understand it, the Endowment's Inspector General reviews grants for compliance with all accounting and financial criteria. I believe stronger steps must be taken to ensure that Federal funds are not spent on obscene and disgusting works.

QUESTION: To what extent do your statutory and administrative authorities allow you to recoup funding if you learn of violations of the law or of the terms of a grant subsequent to award and expenditure?

ANSWER: Section 954(h) of our enabling legislation provides that if the Chairperson determines, after reasonable notice and hearing, that any funds were used in violation of the terms for which the grant was given, the Chairman shall immediately notify the Secretary of the Treasury and the group or State agency with respect to which such finding was made that no further grants will be made under this section to such group or agency until the default, failure to comply or diversion has been corrected, or, if compliance or correction is impossible, until such group or agency repays or arranges the repayment of the Federal funds which have been improperly diverted or expended. 20 U.S.C. Sec. 954(h). The Endowment also has available to it those remedies outlined in OMB Circulars A-102 and A-110 for violations of law or grant conditions.

Just this morning, The Washington Post contained a report that the Administration will now urge Congress to reauthorize the Endowments for one year without restrictions to allow the Commission to conduct it review

QUESTION: What changes are necessary to your FY 1991 budget request if the Commission is to be reauthorized for another year?

ANSWER: Additional funding would be necessary if the Commission was to be extended as follows:
A three month extension would require $203,000.
A six month extension would require $310,000.
A twelve month extension would require $540,000.

QUESTION: What discussions have you had with the Commission members?

ANSWER: I have spoken individually with some to the Commission members in response to their questions about current Endowment procedures. My staff has also been available to provide information.

QUESTION: What advice will you offer them given your experiences to date?

ANSWER: I and my staff will respond as completely as possible to the questions and requests of the commission.

QUESTION: What is the current timeframe for the Commission to conduct its review?

ANSWER: The Commission has begun to meet and has meetings scheduled through August. Our understanding is that unless Congress extends the life of the Commission, they intend to provide a report to Congress by October 1, 1990.

QUESTION: What steps have you taken since becoming Chairman to address the peer panel review process and instill greater accountability for the award decisions that are made?

ANSWER: As I said in my March 26, 1990, testimony before the Senate Subcommittee on Education, Arts and Humanities, I want to assure that taxpayers' money is responsibly spent. As a result, I have taken the following steps to improve the panel process to make it more responsible, more responsive, and more visible to the American people:

- We have opened the policy discussions of all full panels to the public.
- I attend each panel (over 120 panels meet each year), or if I am out of town or unavailable, one of the senior members of my

staff attends to explain the most current legislation and discuss the responsibilities of panel persons. Not only are these discussions useful to the panelists, but they often provide insights as to how the process can be improved.

- I have required that educated lay persons, that is, those who have expertise in the particular discipline, but don't make their living at it, be represented on each full panel. (See also the response to question #13.)
- As for applications which might be controversial, but which the panelists find have artistic merit and which they vote to recommend, I have requested that a careful record be made by which they justify the artistic grounds upon which the recommendation is forwarded.
- Once a panel has made an artistic determination, grants which may be controversial are reviewed by the General Counsel's Office for compliance with all laws.
- The National Council on the Arts members (26 Presidential appointees) are encouraged to observe as many panels' meetings as their schedules allow. The Council's comments and suggestions will be fed back into the system, to assist in continually improving policies and programs.

Since the time of my testimony, I have mandated a full, post-panel review by the deputy chairmen, in consultation with the program directors, of each panel's deliberations and recommendations. This review takes place immediately after the panel's meeting and before the recommendations are forwarded to the National Council on the Arts for their consideration.

In response to congress' direction in our FY 90 appropriation, we have implemented procedures for processing subgrants so that they go through essentially the same review by the National Council on the Arts as the grants recommended by our own panels.

The procedures mentioned above augment the following practices that were, to some extent, already in place at the Endowment:

- Use of site visitors in some categories to assist the panelists with more in-depth reviews of the applicants;
- Assuring that a careful record is made of all panel deliberations;
- Recording of panel meetings and keeping of careful notes by staff;
- Recording the panel's evaluation of each application according to the review criteria outlined in the published guidelines, such as artistic significance, administrative abilities, significance to the field;
- Including in all FY 1990 grant notification letters the requirement that all grantees adhere to the language prohibiting obscenity passed by the Congress with the Endowment's FY 1990 appropriation;
- Including in all guidelines published for 1990 (except those already in print prior to the passage of the legislation) the language attached to the FY 1990 appropriation bill;
- Review of grants by the Inspector General of the Arts Endowment (a position created by Congress which reports directly to the Chairman) for compliance with all accounting and financial criteria; and

- Upon completion of the work or project for which the grant was awarded, submission to the Endowment by the grantee a final report which shows the impact on the community of the Endowment's investment and assures compliance with the grant terms and conditions.

In addition, as I indicated in my March 20th testimony, we are considering modifications to the panel process which require further study:

- Making the panel procedures and guidelines consistent, as appropriate, among the disciplines (such as Visual Arts, Dance, Music, etc.) to simplify the application procedure and make it more easily understood;

- Requiring state and local arts agencies, arts service organizations, and perhaps other grantees of the Endowment to submit the names of qualified panelists to assure that the panelist "gene pool" represents all areas of the country;

- Identifying better ways in which the panelists can be made fully aware of the past performance of applicants so that the artistic quality of that performance can be judged. Complaints from persons who have not seen a particular performance are seldom reliable measures of artistic quality. We must, however, develop a means by which future panels can, to the greatest extent possible, accurately and thoroughly consider past performance;

- Increasing the number of site visits of potential applicants within the limits of our budget;

- Convening annual orientation meetings for all chairmen of panels to meet in the coming fiscal year; and

- Considering multi-year grants to selected applicants. These grants would be subject to the Endowment's annual appropriation from Congress, but would give some certainty to the applicant and would greatly reduce the application load with which the panelists have to deal each year. This reduction would, in turn, allow more in-depth analysis of each applicant.

And importantly, the Congress has directed that a Commission study the grant making process of the Endowment. We look forward to the recommendations of the Commission.

QUESTION: What changes have been made in the grant review process to eliminate subgrants without comprehensive National Council review?

ANSWER: Subgrants resulting from Endowment-awarded FY 1990 grants, except for those made by institutions which have been Congressionally exempted from this requirement (e.g., state arts agencies, local arts agencies and regional arts organizations), will be reviewed by the National Council on the Arts. The material provided for the review of individual subgrants by the National Council on the Arts is similar to that provided for regular Endowment grants.

QUESTION: What actions are you taking to ensure as broad a composition, in terms of experience, culture, and geography, of the panels which advise you, as possible?

ANSWER: I am always looking for prospective panelists in my travels across the country. I have encouraged members of the National Council,past and previous panelists, and agency staff, to assist in identifying panelist candidates with widely varied experience in the arts and who would represent varied cultural backgrounds, aesthetic viewpoints and geographic locales.

Further, I refer you again to my March 26, 1990, testimony before the Senate Subcommittee on Education, Arts and Humanities:

- We have developed a grid which shows where each panelist comes from geographically. By so doing, we attempt to achieve wide geographic distribution and have at least one panelist from each region of the country who will know the work of many of the applicants from that region.
- We have developed a grid to assure that as many cultures as possible are represented on each panel.
- To the extent possible, we attempt to mix the panels with individuals of varying experience (and to the extent possible, viewpoint).
- In our 1991 budget request, we seek funds to increase the panel sizes to get a broader spectrum of experience, cultures and geography. Our panel sizes range from 5 to 15. Just as I preferred 12-person juries to 6-person juries when I was a trial lawyer, I prefer larger panels.

QUESTION: What consideration has been given to inclusion of lay persons in the decision-making panels, so that they might include some without direct experience in a particular discipline, but which would give the panels representation of the public interests of the taxpayer?

ANSWER: Over the last decade many trustees, patrons, foundation representatives and other such individuals who are not professional artists have served on Endowment panels. The agency is presently including an educated layperson on each Endowment panel.

In recent weeks, in the context of the debate over the reauthorization of the NEA, some House Members have proposed changes to the grant structure of NEA, with a higher percentage of your total funds directed towards state-run programs. Others have criticized this approach. Hence, the proposal for a one-year "stay" that we read about today.

QUESTION: If an arts organization is competitive at the national level, wouldn't it also be competitive at the state level?

ANSWER: Arts organizations that are competitive at the national level are usually competitive at the state level. Of a geographically representative sample of 419 organizations receiving NEA grants in 1987, 327 (or 78 percent) also received grants from their state arts agencies. However, a small but significant percentage of organizations receiving Endowment grants did not receive state arts agency support. Moreover, it is to the advantage of arts organizations to have access to a plurality of public funding sources (federal, state and local) in order to counteract instability resulting from year to year variations in support from any single source.

QUESTION: For example, if a symphony group from a midwestern state receives funding from the NEA Music program, if it is so meritorious, wouldn't that same symphony orchestra likely receive funding under an expanded state arts program?

ANSWER: A symphony orchestra receiving support from the Endowment would be likely to receive support from its state arts agency. However, as noted above, it is to an organization's advantage to have access to support from a plurality of public funding sources. Moreover, support from a state arts agency does not carry the national recognition that can often assist efforts to raise private funds. The attention of state arts agencies is, appropriately, focused on activity within their state borders. They do not exercise a national perspective or a mandate to identify and give special recognition and support to groups of national significance. We are told repeatedly that the Arts Endowment "seal of approval" is critical for raising funds from corporations and individuals.

QUESTION: How would the allocations change for each state?

ANSWER: Under the proposal put forward by some House members, it has been suggested that 60 percent of the Endowment's program funds (exclusive of Treasury and Challenge) be given to the state arts agencies and regional organizations. (TABLE 1 See Attachment A-1) projects the grants which state arts agencies would receive if 60 percent of program funds ($75.480 million at the FY 91 Congressional request level) were apportioned among the states according to the current formula.* Also included for purposes of comparison are the FY 90 Basic State Grants, which reflect the distribution of 20 percent of program funds to the states.

TABLE 2 (See Attachment A-1) projects the possible impact of the apportionment of 60 percent of program funds among state arts agencies on overall funding by state. In order to determine the possible impact, we have added the state's projected formula grant (column 1) to its projected share of other NEA grants (column 2) to get a projected total (column 3). The projected total is then compared with FY '89 grants to the state (column 4) to determine the difference (column 5).

The projected share of other NEA grants is determined according to the following steps:

--funds to be apportioned by formula ($75.480 million at 60 percent) are subtracted from the total NEA funds available for grantmaking ($153.800 million) to produce a figure of $78.320 million.

--This figure is multiplied by each state's percentage share of FY '89 NEA grants (exclusive of formula grants to states and regions) to determine the projected share of other NEA grants.

Formula grants to regional organizations are not reflected in TABLE 2, either in the PROJECTED TOTALS or in the '89 TOTALS.

TABLE 3 (See Attachment A-1) presents the same information as TABLE 2, except that per-state allotments for regional programming are factored in.

* Under the current formula each state and jurisdiction is allotted $200,000; then 1/8 of funds available for formula distribution is apportioned among the states according to population and 1/8 is allotted to regional groups of state arts agencies in equal shares per member state. Any funds remaining are divided equally among the 52 states and jurisdictions with populations of more than 200,000.

WEST VIRGINIA ARTS PROGRAMS

Mr. Frohnmayer, from grant information provided to the Subcommittee, I note the following information for grant to arts organizations in my state of West Virginia.

In 1987, 15 grants were funded, for a total of $622,550. In 1988, 16 grants were funded, for a total of $658, 350. But by 1989, only 10 grants were funded, for a total of $542, 400, despite an overall increase to the NEA's budget of approximately $3.8 million, or 2.3 percent.

QUESTION: What accounts for this downturn of grants funded in West Virginia?

ANSWER: In FY 1989, the Endowment received fewer grant applications from West Virginia than were submitted in 1987 and FY 88.

QUESTION: Were fewer grants submitted by West Virginia arts organizations in FY 1989 than were submitted in FY 1988?

ANSWER: Yes.

QUESTION: How do you propose to rectify this situation in FY 1990 and FY 1991 and what actions can the Endowment take when applications decline by nearly 30 percent, particularly for small and rural states?

ANSWER: We will continue to encourage artists and arts organizations from West Virginia to take advantage of opportunities available to them just as we do across the country. We intend to make a much greater effort to distribute information about our programs to every part of the country, giving highest priority to areas where application levels have declined or remained low. Actions under consideration include: (a) wider distribution of our Guide to Programs through state, local, and regional arts agencies; (b) increased staff travel - particularly to small and rural states; (c) creation of an "800" number, which potential applicants could contact for program information; (d) development and distribution of videos describing agency programs and activities; and (e) provision for public meetings or grants workshops in various communities.

QUESTION: What actions can the Endowment take when applications decline by nearly 30 percent, particularly for small and rural states?

ANSWER: See the answer to previous question.

QUESTION: Is your travel budget sufficient to allow the program people to visit the states arts organizations?

ANSWER: The Endowment's travel budget is sufficient to enable program staff to make some visits to state arts agencies and other arts organizations in the states. However, we would like to make many more such visits. As it is, trips are carefully planned to stretch our limited travel dollars as far as possible. During the past year, for example, the staff of our States Program visited nine states and, in addition, was able to take advantage of opportunities at regional and national meetings to work with staff of all state arts agencies.

QUESTION: What percentage of NEA's applications are received by state?

ANSWER: Numbers and percentages of applications by state for FY 89 are provided in TABLE 4 (See Attachment A-1).

QUESTION: What is the percentage of grants awarded by state?

ANSWER: Numbers and percentages of applications awarded by state for FY 89 are provided in TABLE 4 .

QUESTION: How does the ratio of per state funding as a percentage of total NEA funding compare to the ratio of state population as a percentage of the total population?

ANSWER: A state-by-state comparison of the percentage of grant dollars for FY 89 with the percentage of total population is provided in TABLE 5 (See Attachment A-1).

QUESTION: How would West Virginia programs be affected under the proposal to shift more of NEA's funds to the state programs?

ANSWER: It would be difficult to predict the full impact on West Virginia's programs of a major shift of funding to the states. The Basic State Grant to West Virginia's state arts agency would increase substantially, as indicated in TABLE 1. However, some state arts agencies have expressed concern that such an increase in federal support could lead to a diminution of state and local funding. A major shift of federal arts funds to the states could also involve a shift of federal responsibilities, with accompanying increases in administrative costs, which would have to be duplicated in each state, thereby reducing funds available for the arts.

ARTS IN EDUCATION

Mr. Frohnmayer, on several different occasions, you have strongly endorsed the need for greater education in the arts. You suggest that art is at the cultural core of this country--that it challenges us, it inspires us. And in some instances, it infuriates us.

Your budget request for FY 1991 proposes an increase of $2,000,000 for the arts in education line-item. The arts in education funds are used for a variety of purposes, including basic education grants for state arts organizations and state departments of education to coordinate in the development of curricula in support of the arts; for grants to support artist residencies in schools; and for special projects, such as educational endeavors within cultural institutions.

QUESTION: Mr. Frohnmayer, what specifically would the additional funds be used for?

ANSWER: The additional $2 million, for the Arts in Education (AIE) Program would allow us to build upon our longstanding relationships with our public partners, and greatly expand or begin relationships with new partners.

Specifically, $1.15 million would be used to create a new initiative, the Arts Organizations Education Initiative. This category would support the educational activities of arts organizations.

$400,500 would be used to increase AIE funds for the state arts agencies artist in residence program. (The $3.85 million proposed in FY 91 budget is still less than the $4.1 million awarded to the states in FY87 for artist residencies, teacher training and other activities.)

$400,000 would be used to augment AIE's Special Projects field grants. Grants awarded in FY89 went to only 10% of the applicant pool - or 20 projects (avg. grant - $25,000, range is $5,000-$50,000).

QUESTION: How do you propose to allocate the requested increase among the different aspects of the arts in education initiative?

ANSWER: Out of the $1.15 million allocated to the initiative, $1 million will be distributed in cooperation with the NEA discipline programs to cultural institutions. $150,000 will be allocated to local arts agencies for model arts in education projects.

QUESTION: Will it be equally divided, or geared toward special projects?

ANSWER: The funds will be geared towards special projects and allocated on a competitive basis for ten to twenty model projects. The intention of the initiative is not to divide the funds equally among disciplines but rather to fund some of the best arts in education projects. We are particularly interested in projects which seek long-term change. It is the goal of the program to fund projects in rural, suburban and urban communities as well as to encourage arts-in-education programs which have at their root a commitment to cultural diversity.

QUESTION: For the record, what is the funding available for the different arts in education sections, FY 1989-1991?

ANSWER:	FY 89 (Actuals) @$169,090	FY 90 (Orig Alloc) @$171,225	FY 91 (Cong. Req) @ $175,000
AIS Basic Ed Grants	1,012	1,300	1,300
State AIE Grants	3,450	3,400	3,850
Special Projects	1,193	900	2,450
	5,654	5,600	7,600

QUESTION: How do you propose to allocate arts in education funds among rural, suburban, and urban school districts?

ANSWER: Arts in education is one of the best programs the NEA has for serving the range of rural, suburban and urban school districts. Many of our AIE artists residency programs are the only arts experience of any kind in some rural communities. Allocating the bulk of our funds through the states also guarantees this kind of mix in geographic distribution. With model projects, our intent is always to serve that mix. In FY 89, for example, we established a cooperative agreement with four school districts, specifically seeking one urban (Boston) one suburban (PG County, MD) and two rural (Princeton, Mn and Starkeville, Ms).

Mr. Frohnmayer, I understand that you have been conducting "summits" with leading experts in the field of arts education. These meetings have provided you with an opportunity to receive input from the people who must carry out these programs at the local level.

QUESTION: Would you share with the Committee some of the input you have received from your peers?

ANSWER: These meetings have been extremely helpful. The leading experts in education are eager to have the Endowment take a leadership role in this field and to make arts in education of the highest priority. They want to see the arts included as part of the President Bush's education agenda. They want the Endowment to stay out of curriculum development (at least the development of a "national curriculum"). They see a major role for the Endowment as a source of funding, of information exchange and as a "bully pulpit" for arts in education.

QUESTION: What recommendations have they made regarding arts education?

ANSWER: Their recommendations include:

1. The development of a national agenda for arts in education with the goal of having arts basic to education by the year 2000.
2. The inclusion of the arts in the President's education agenda.

3. The involvement of cultural institutions to a much greater degree in our support of projects.
4. Support for the exciting new work being done in the area of assessment in AIE.
5. Providing information to the field about outstanding models.
6. Focusing our support in special projects on long-term change.
7. Encouraging new partners in arts in education, both in the private sector and with other federal agencies.
8. Making arts in education an integral part of the discipline programs within the Endowment
9. Working more closely with the professional art teachers already in the schools.

QUESTION: Are there further actions that NEA can take to make their job any easier?

ANSWER: Absolutely. If we want to see change in education, we must work with teachers. This can be done through teacher training institutes, through the development of better ways of providing information, through new assessment models. We could also work to change the way the arts are taught to students who are studying to be teachers by working with college and universities.

QUESTION: What progress has been made by different states in addressing the arts as part of their basic curriculum?

ANSWER: Several states have made tremendous strides in this area. South Carolina, for example, has developed a project called Target 2000 which has the support and collaboration of the State Arts Agency, the State Department of Education, citizen groups, teachers, superintendents, legislators, artists and cultural organizations, to help make the arts a basic part of education by the year 2000. In addition, the state legislature is giving money to the State Dept. of Education for next fiscal year to specifically address arts education goals.

With support from the State Arts Agencies and the State Department of Education, the Illinois legislature has mandated that by 1991 all school districts must implement arts education testing for their students.

Arizona recently adopted the "Oak Creek Accord," which presents an agenda for making the arts basic to education for both the Department of Education and the Arizona Commission on the Arts. The Dept. of Education. has also passed a fine arts requirement for high school graduation, and is upgrading its primary teacher certification to include the arts.

We also recently issued a Request for Proposal to assess the Arts in Schools Basic Education Grants programs in several states. The findings from that report should be available in the Winter, 1991.

QUESTION: How many states have received curriculum planning grants?

ANSWER: To date, 30 states have received planning grants.

QUESTION: How many have proceeded and received implementation grants?

ANSWER: To date, fourteen states that received planning grants have also received implementation grants. (It is not a requirement that an state arts agency receive a planning grant first.) In addition, three states received implementation grants without receiving a planning grant first.

QUESTION: For those that have applied for implementation grants, but whose grant application was denied, what have been some of the reasons for denial?

ANSWER: Some applications were unclear; the cost of the project was too high relative to the potential impact on others; the project was not well thought-out in some; and, the application seemed to be a continuation of the planning phase rather than the implementation phase (this occurs frequently in some).

QUESTION: Are your award criteria clearly identified for these grants?

ANSWER: The award criteria are clearly outlined and described, as well as weighted, in the application guidelines.

QUESTION: Are you working with those states to address the criteria and improve their applications?

ANSWER: We always encourage applicants to talk with our program specialists to improve applications. In addition, after panel review, program staff we convey panel comments to the states and visit them to provide technical assistance whenever possible.

QUESTION: How are we to gauge progress in discerning the arts education of our children?

ANSWER: The Arts Education Research Centers at New York University and University of Illinois have, with Endowment support over three years now, done studies, tests, and projects to help us better understand the impact of arts education. Reports from these centers will be published and disseminated in 1991.

Arts education experts have always known that for education reform to occur, we must be able to test arts education, just as we test other basic subjects such as math and history. Recently, the National Education Association has questioned whether or not standardized tests truly measure the learning of our children, especially higher order thinking skills (problem solving, making choices, etc.) In Vermont next year, all school districts will be using a portfolio method of assessment.

The Arts Endowment hopes to encourage further research in this area, through an expanded Special Projects subcategory which directly addresses the development, implementation and dissemination of assessment models. In addition, we will soon be requesting proposals for the compilation of several research studies which show that students with arts education and arts experiences score better on some standardized tests.

QUESTION: To what extent do you attribute progress to the funds provided by NEA?

ANSWER: The Endowment's arts education programs have been the catalyst for change in many areas. At the May National Council on the Arts meeting in Winston-Salem, Scott Sanders, Executive Director of the South Carolina Arts Commission, stated that the most important grant the Commission ever received was a $20,000 planning grant from the Endowment's AIE. This is the same grant that helped to fund the target 2000 project mentioned in a previous question.

Another example is the Metropolitan Opera's teacher training workshop. With small grants from the Endowment, the Opera has been able to train teachers to introduce opera for students. This past year, the Met was awarded a Special Projects grant to bring teachers to the Opera from outside the greater New York area. One of these teachers, Betty Castro, from Texas, is now working with her students as they develop an opera in Spanish. Ms. Castro's program was recently featured on Sunday Morning with Charles Kurault Sunday, May 26th.

QUESTION: How is the NEA arts in education program coordinated with other programs in the Department of Education?

ANSWER: Our coordination with the Department of Education has mostly been in the area of research. Specifically, we have worked with the Office of Education Research and Improvement, where we have jointly funded the National Arts Education Research Centers at New York University, SUNY-Albany (specifically Literature) and the University of Illinois at Urbana. This year the AIE program also provided information and assistance to the National School Recognition Program. We would look forward to even greater cooperation between the two agencies, particularly in the area of high-risk students, the arts are often a wonderful way of reaching those students and of building educational strengths.

QUESTION: For the artist residencies, do the NEA funds provide the entire support, or are these funds matched by local school districts?

ANSWER: State Arts Agencies are required to match our grants at least 1:1; however, in actuality, grantees provide a match of closer to 8 or 9:1, often with private as well as public dollars.

QUESTION: The FY 1991 budget justification projects that all residency grants will be funded in FY 1990 and FY 1991. Which is more fundamental--core curriculum or artist residencies?

ANSWER: Developing the arts as basic to the core curriculum is our goal. Our experience has shown, however, that achieving this goal will not be easy nor will it happen right away.

Artist in residence programs are often the only arts experience some children will have -- in or out of school. It is our belief that these residencies lay a ground work in the school system for understanding the importance of the arts and that our AISBEG grants, take that program a step further.

QUESTION: Wouldn't a grounding in arts fundamentals be a logical precursor to extended exposure under the auspices of a residency program?

ANSWER: The best programs are one which combine a grounding in arts fundamentals with a residency program. If a school has just the residency program, the more successful ones are those well integrated into the system and involve teacher training and learning materials. A strong arts curriculum, preparation for a residency and follow up after a residency is the most successful model.

QUESTION: As a new initiative, you propose to allocate arts in education funds to the different NEA program disciplines to develop exemplary education projects within cultural institutions. What discussions has the Endowment had with these institutions?

ANSWER: We have talked with several arts institutions in different fields about making funds available for education projects. This has been enthusiastically received because cultural institutions all recognize the importance of building future audiences.

QUESTION: Have they made specific proposals as to how they could use such funds?

ANSWER: Although we haven't received (or requested) specific proposals, several of the discipline programs have made suggestions for the use of these funds, based on needs identified within their art forms.

QUESTION: Would these funds be a complement to existing educational programs of those institutions?

ANSWER: It would not be the intention of the initiative to start new programs but be a complement to existing ones, the reason being that most arts education projects are already under-capitalized. In addition, to see real change we need to start with the project over a 3-5 year period. It is our hope that we could get private foundation support to fund these projects after our initial investment and that these model projects could be replicated by other institutions.

OUTSIDE CONTRIBUTIONS TO THE ARTS

Mr. Frohnmayer, NEA often serves as a catalyst in generating outside contributions to provide for broader dispersal of the arts among the citizens of this country. By statute, all NEA grants must be matched on at least a 1:1 basis. For FY 1989, NEA estimates that $119 million in Federal grants generated outside contributions totaling some $1 billion.

QUESTION: What has been the pattern of outside philanthropy and support for the arts over the last five years?

ANSWER: Support has increased from $4.5 billion in 1984 to $7.49 billion in 1989 (based on data from Giving USA 1990).

QUESTION: Have these contributions increased, decreased, or remained relatively constant?

ANSWER: Contributions have increased by 66% over a five-year period (based on data from Giving USA 1990). I would add, however, that many arts organizations report increased competition for the charitable dollar from many other worthy social concerns including housing, health care, the environment, etc.

At last year's hearing, there was a discussion about the geographic distribution of the giving. Some speculated that perhaps a large percentage of what is donated is concentrated in urban areas.

QUESTION: Has NEA done any analysis of its programs and their matches?

ANSWER: In FY 89, $119 million in Endowment grants generated private matching support for projects worth $1.36 billion. On the average, every $1 in Endowment grants generates $3 in private matching support. Since 1977, the $236.9 million awarded in Challenge grants has leveraged nearly $2 billion additional dollars in non-Federal matching funds.

QUESTION: What is the distribution among urban, suburban, and rural beneficiaries?

ANSWER: We have not undertaken an analysis of grantees by location due to complexities in defining the parameters of urban, suburban, and rural support. For example, often there are rural beneficiaries of grants made to organizations in urban locations (e.g., Great Performances serves many rural homes, but the match must be raised in New York).

QUESTION: What can be done to help some of the more remote, rural areas of the country to ensure their active participation in the arts?

ANSWER: One way is to strengthen a number of existing programs at the Endowment which have already shown their effectiveness in enhancing participation of rural areas in the arts:

Our Dance on Tour Program brings dance companies to cities and towns well beyond existing market areas; Expansion Arts' Rural Arts Initiative helps State Arts Agencies support exemplary rural arts organizations; the States Program's Special Rural Projects grants encourage State Arts Agencies to develop their own plans for addressing the needs of their rural areas; the Locals Program continues to expend a large portion of its funds on towns smaller then 50,000 (40% of its funds since 1984); in some instances, our Arts in Education grants are the only source of arts programming in rural areas; and the Folk Arts and Expansion Arts Programs continue to reach into rural communities around the country.

QUESTION: Do the rural areas experience a higher percentage of their giving from individuals, as opposed to large corporate donations?

ANSWER: Yes. Few rural towns are headquarters of major corporations and therefore do not benefit much from corporate largesse. Moreover, many rural areas are poor and few enjoy strong philanthropic support of any kind. Since the tax base of most rural areas is low, local public funding is limited as well.

ADMINISTRATIVE BUDGET

For FY 1991, the Arts Endowment is requesting an increase of roughly $1.5 million for its administrative budget. Many of these costs are associated with non-controllable items. Nonetheless, these costs are real and must be met.

QUESTION: What impact have you experienced with your administrative budget as a result of recent changes to the grants process, such as increased review of subgrants?

ANSWER: In responding to new grant language included in our FY 90 appropriation, we have experienced an increased workload in application processing and grant awards in both the Program Offices and the Grants Office. In enhancing post-award evaluation and monitoring the Grants Office has has assumed primary responsibility for overall management and coordination of this effort without additional staff. If additional requirements are forthcoming, we may have to reexamine this situation.

In order to process and review the additional materials supporting grants involving subgranting it was necessary to add two positions (Full-Time-Equivalents) during FY 90. These positions are included in our FY 91 base. The subgrant review requirements were implemented for grants supported with FY 90 funds, therefore, we have not yet felt the full impact of the follow-up documentation review. We anticipate that between 130 and 160 subgrants in the Media Arts and Inter-Arts Programs alone will require review. Grants involving subgranting have to be reviewed twice. First, they are reviewed as part of the normal application review process by the National Council on the Arts which makes funding recommendations to the Chairman. After a grant is awarded, all proposed subgrants must be reviewed by the Council and approved by the Chairman. Again, it is too early to assess the impact of this increased workload.

QUESTION: Have your administrative costs increased as a result of additional scrutiny of the Endowment's programs?

ANSWER: The Endowment's administrative costs -- as measured in allocation of staff resources, mail and facsimile costs -- have increased enormously over the past fifteen months. Requests for information from the Congress, GAO, media and the public in general have increased significantly.

QUESTION: What change has NEA experienced in Freedom of Information Act requests in the last three years?

ANSWER: Freedom of Information Act (FOIA) requests have more than doubled over the last year. For example, in 1988, the Agency processed 69 separate requests. In 1989, it processed 80 separate requests; 56 of those were received after the controversy began in March 1989. During the first 5 months of 1990, the Agency received the same number of requests as received during the entire previous year.

Additionally, FOIA requests have become more complex and multi-faceted. In many instances, requests have required hours of program staff time in the research and analyses of materials, as well as coordination and legal analysis by the Office of General Counsel. One individual's request for information required consistent attention and collective resources of the programs and management offices, for over a period of more than four months, in order to respond fully. That individual has recently submitted another multi-faceted request. Requests from reporters have increased dramatically and have required an almost constant compilation and review of the materials requested. Processing this information has consumed enormous amounts of staff time, especially that of the offices which report directly to the Chairman.

QUESTION: How have these affected your costs?

ANSWER: These increased demands have weighed heavily on the limited staff resources. The Agency has also experienced an overall increase in costs associated with express mailings and materials provided by facsimile. In FY 89, the Agency budgeted $25,000 for express mailings and actually spent more than $34,000. In FY 90, the Agency has already spent its budgeted $30,000 and expects that amount to reach or exceed $40,000 by the end of the fiscal year.

QUESTION: What analysis have you done of the potential impact to your administrative costs of some of the proposed changes identified to help improve the Endowment's accountability?

ANSWER: We have already implemented several measures to enhance the Endowment's accountability in the grant making process. Some changes, such as bringing panel chairman to National Council meetings to present grant recommendations, were accomplished within existing budgets. Other changes such as having Council members attend various panel meetings, will require an additional $30,000 within the administrative budget requested for FY 91. In selecting panelists for next year we were able to increase size, duration and achieve greater ethnic, professional and geographic distribution within the planned budget. As we add lay persons to each panel during FY 91 we will have to increase the allocation for panelists by approximately $110,000. Additionally, the recommendations coming from the Commission established to study our panel processes could have an impact upon our FY 91 administrative budget.

QUESTION: What costs are you experiencing in FY 1990 associated with increased Federal pay?

ANSWER: During FY 1990 we absorbed the cost of an overall 3.6 percent pay raise which is estimated at $300,618. In addition, we absorbed the cost of the Senior Executive Service pay raise which is estimated at $27,455. In addition to the two pay raises, we also experienced an unanticipated increase of $144,523 for employee benefits and health insurance.

QUESTION: What are your estimated costs for FY 1991?

ANSWER: The FY 1990 pay raise will carry into FY 1991 at an annualized cost of $409,867 and we will have to cover the FY 1991 pay raise now estimated at 3.5 percent ($385,340). Our FY 1991 budget includes half the cost of the FY/1991 3.5 percent pay raise with the other half being absorbed. The Senior Executive Service pay increase is estimated to cost $138,480 during FY 1991. Additionally, we are projecting an increase of $117,777 for continued transition to the new Federal Employee Retirement System (FERS).

QUESTION: Are those costs reflected entirely in your budget?

ANSWER: Our FY 1991 Administrative Budget request includes funds for half of the 3.5 percent pay raise planned for FY 1991. We will absorb the unfunded half ($192,670) from non-personnel object classes.

QUESTION: What is the impact on the panel review process when NEA is forced to absorb administrative cost increases?

ANSWER: For the most part we have held the panelist allocations harmless in terms of cost absorption. The panels are at the heart of our grant making process and we do not wish to compromise their integrity in any way. With the additional funds Congress provided in FY 1990 we were able to increase honorarium to $100 per day, the first increase since the early 1970's. During FY 1990 we also increased panelist per diem to $121 and will hold that rate into FY 1991 even though the current Washington, DC rate rate has gone up to $125 per day. We will have to wait until FY 1992 to adjust the per diem given overall constraints on the FY 1991 Administrative Budget.

NEA'S FUTURE

Mr. Frohnmayer, this year marks the 25th anniversary of the original legislation establishing the National Endowments for the Arts and the Humanities. I will ask you similar questions as asked of Mrs. Cheney with respect to her expertise at the Humanities Endowment.

QUESTION: How would you characterize the performance of the NEA over the last 25 years?

ANSWER:

The NEA has fulfilled its mission by serving as a catalyst for the development of art, audiences, and creativity in America. The NEA has used its modest appropriations to leverage funds from the private sector. In 1988, $119 million in grants (not including Challenge funds) helped generate over $1.36 billion in non-federal funds. Private giving to arts and culture has grown from $44 million in 1965 to $7.49 billion in 1989.

The following data show the growth of the arts since the NEA was created. These numbers are derived from a variety of sources. The data for the most recent years (1985-1990) are the most reliable. In many cases, the 1965 data are based on best estimates, often provided by service organizations.

	1965	1990
Dance Companies	37	250
Art Museums	375	700
Symphonies (Budget: $280K+)	110	230
Choruses	10	80
Media Centers	15	130
Opera Companies	27	120
Theaters	56	420
Small Press Book Publishers	650	3,743
State Folk Art Programs	1	46
State Folk Art Apprenticeships	0	31
Local Arts Agencies	60	3,000
with FT staff	**	600
State Arts Agencies	5	56
State Arts Appropriations	$2.7M	$285M
Artists in United States	0.6M	1.6M

QUESTION: What activities or programs are planned to commemorate this anniversary?

ANSWER: Our celebration will be modest. The National Assembly of Local Arts Agencies has traditionally celebrated National Arts Week in November. They have agreed to move the annual event to the last week in September this year in order to coincide with the NEA anniversary. We also will mark the anniversary with the Heritage awards for national living treasures in the folk arts and with The National Medal of Arts ceremony at the White House.

QUESTION: What do you foresee for the Endowment's next 25 years?

ANSWER: The NEA will continue to provide national leadership in the arts by funding artists and arts institutions and making the best of the arts widely available to the American people. New work by American artists will continue to be funded as the United States enhances its international reputation by having increasing numbers of works performed and exhibited abroad.

New initiatives by the NEA will stress multiculturalism, arts in education, access to the arts, and international collaborations in the following ways:

Multiculturalism: To preserve and celebrate the variety of cultures in the United States, the NEA will fund more institutions that seek to preserve the artistic traditions that make up our heritage.

Arts in Education: In 1989, the NEA funded 9,799 artists to work in 11,600 schools, reaching 4.3 million students. This and other education programs will continue to grow; it is hoped that in the near future every student will receive prescribed art instruction as part of his or her education.

Access to the Arts: Access to the arts for all people in this country, regardless of geography, disability, or language, will become an even greater priority. Rural initiatives will bring art to the rural areas of the country; developments in technology and new laws will continue to make the arts more available to the disabled.

International: There will be more collaborations and exchanges with other countries. Cooperative projects with Mexico and other Latino cultures give participants an opportunity to interact with our neighbors, opening dialogue and understanding. Recent events in Eastern Europe have opened the way for international cultural exchanges. Russia and Japan seek greater cooperation.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

ARTS FUNDING CONTROVERSY

Bill language was included in the FY 90 Interior bill requiring the establishment of a temporary independent commission to review the NEA's grant making procedures and other purposes. The language also required that a report be issued to the Speaker of the House and the President of the Senate no later than 180 days after enactment.

QUESTION: It is my understanding that the temporary commission was established only recently. Accordingly, is it likely that the report will be completed anytime soon?

ANSWER: Unless Congress votes to extend the Commission, the Commission is expected to issue a report by October 1, 1990.

QUESTION: Why did it take so long to establish the commission?

ANSWER: The members of the Commission were appointed by the White House, with four recommendations each from the House, the Senate and the White House. The Senate did not made its recommendation to the President until January 1990. Because all Presidential appointments must go through a thorough clearance process, it took several months for clearance. The formal appointment of the commission was made on May 16, 1990.

QUESTION: Due to the fact that the commission was established so late in this fiscal year, do you believe it is prudent and necessary to reauthorize the temporary commission so that it will function in fiscal year 1991?

ANSWER: It is important that the Commission have adequate time to complete its work. If that requires an extension of the Commission into FY 1991 then I hope Congress will do so.

Another part of the language required the NEA to find a better method to seek out those works that have artistic excellence and to exclude those works which are without any redeeming literary, scholarly, cultural or artistic value.

QUESTION: How have you implemented this language?

ANSWER: The Endowment has taken the steps enumerated belcw to implement these directives:

1) the Chairman or a member of his immediate management staff, attends every panel meeting to verbally inform panelists of the directive and to discuss their responsibility with respect to it:

2) If after an application has been recommended for funding by a panel and is deemed by program staff to warrant further review, the application is forwarded to the appropriate Deputy Chairperson and the General Counsel for review and approval.

3) If the Deputy Chairperson and the General Counsel have reviewed the applications and feel that further review is needed, those applications are specifically brought to the attention of the National Council on the Arts and the Chairperson. The applications are discussed at length, the Council makes a recommendation to the Chairperson, who in turn makes the final decision as to which applications will receive funding. The merits of the applications are considered in light of the published review criteria in the applicable guidelines and the overall goals of the Endowment stated in 20 U.S.C. Section 954(c).

4) Once a grantee has completed the work or project for which the grant was awarded, a final report must be submitted to show the impact of the Endowment's investment on the community and to confirm compliance with the grant's terms and conditions.

5) The Endowment has taken steps to ensure that the peer review panels are more responsible, responsive and representative of the American people by ensuring that each panel has a geographical and culturally diverse make-up. In addition, the Endowment attempts to mix the panels with persons of varied experience and aesthetic viewpoint, as well as to include educated lay persons on all panels.

6) In the Endowments's 1991 budget request, we seek funds to increase the panel size to obtain an even broader spectrum of experience, cultures and geography. We also seek additional funds to increase the number of site visitation reports in an attempt to be better informed of the quality of the work or artist before a grant is given.

7) We have implemented procedures for dealing with subgrants so that they go through essentially the same review by the National Council on the Arts as grants recommended by our own panels. State and local programs are excluded from this procedure because they answer to and are supervised by appropriate levels of local government.

QUESTION: If so, what difficulties have you encountered in implementing it?

ANSWER: The Endowment has encountered no specific difficulties in implementing these procedures.

The Mapplethorpe exhibit was recently in the news with regard to its display in Cincinnati, Ohio. If I recall correctly, the museum director was arrested for his decision to show the exhibit.

QUESTION: If he is prosecuted, do you anticipate that the outcome could be used as a "test case" for future obscenity controversies?

ANSWER: As you know obscenity determinations are made on a case by case basis and require the application of local community standards. Accordingly, while the Cincinnati case would determine, at the trial court level, whether the Mapplethorpe exhibit was or was not obscene in Cincinnati, it would not determine whether the same exhibit would be deemed obscene in another community. Likewise, it would not be determinative of whether other works would or would not be deemed obscene.

Language was included in the FY 90 conference report restricting the use of funds, "... to promote, disseminate or produce materials which in the judgment of the National Endowment for the Arts or National Endowment for the Humanities may be considered obscene..."

QUESTION: How have you changed your procedures to incorporate this language?

ANSWER: The Following is a list of procedures the Endowment has in place to respond to Congress' mandate:

1)The Endowment includes the specific language prohibiting funding of obscenity in all of our program guidelines except those FY 90 guidelines already distributed before the law was passed.

2) The Chairman, or a member of his immediate management staff, attends every panel meeting to verbally inform panelists of the new language and to explain what their responsibility is in implementing it.

3) The directive is included in written material given to panelists.

4) After a panel meeting has concluded, the appropriate Deputy Chairperson and Program Director meet to discuss recommended applications that might potentially be in violation of the obscenity prohibition.

5) If after an application has been recommended for funding by a panel, it is deemed to be controversial in any way it is forwarded to General Counsel by the Deputy Chairperson for further review.

6) Once the General Counsel and Deputy Chairperson have reviewed an application and determined that it could be troublesome (not necessarily in violation of the obscenity prohibition, but troublesome in any way), that application is specifically brought to the attention of the National Council and the Chairman for further review.

7) All grant award letters include the obscenity prohibition language, up front, as one of the terms and conditions of accepting the grant.

8) The Endowment has recently released a Statement Of Policy and Guidance interpreting the obscenity prohibition in order to make it as clear as possible to grantees what types of materials cannot be produced, promoted or disseminated with federal funds.

9) Once a grantee has completed the work or project for which the grant was awarded, a final descriptive report must be submitted to show the impact of the Endowment's investment on the community and confirm compliance with all the terms and conditions of the grant, including the obscenity prohibition.

10) If a final report suggests that the terms and conditions of a grant have not been met, that report is forwarded to the Final Reports Review Board. Members of that Board include the relevant Deputy Chairperson, the Deputy Chairperson for Management and the General Counsel.

11) If it is determined that the terms and conditions have not been met then the Endowment has available to it the remedies provided in Section 954(h) and OMB Circulars A-102 or A-110. These remedies are noted in all grant award packages.

The General Accounting Office was asked by a Senator to investigate whether the Endowment had implemented sufficient procedures to enforce the obscenity prohibition and to investigate if there had been any violations of the prohibition to date. The GAO delivered its report in testimony before the House reauthorizing subcommittee on June 6, 1990. The GAO concluded that NEA has met its legal obligation to adopt reasonable controls designed to prevent violations of section 304 and that it has the ability to seek recovery of any grant funds that may be used in violation of section 304(a). A copy of that report is furnished for your convenience.

QUESTION: Does this language in any way affect grants awarded prior to FY 90?

ANSWER: No. The prohibition only applies to appropriations for fiscal year 1990. See 103 Stat. 701, 741.

QUESTION: What has been the financial burden on your agency as a result of this controversy?

ANSWER: Thousands of staff hours have been consumed in responding to inquiries received under the Freedom of Information Act (FOIA), from the Congress, the Government Accounting Office, the media, special interest groups, the arts field and from our applicants and grantees. Over 75 percent of our Public Affairs Office staff time is committed to answering thousands of telephone calls, hundreds of letters, conducting interviews with the media and traveling to meet with special interest groups. The General Counsel's Office is responding FOIA requests at more than double the rate of the previous year. Additionally, the requests are becoming more complex and require a significant amount of research and response time by Program staff and then must be reviewed by General Counsel and, in many cases, the Chairman. The Congressional Liaison Office is fielding a significantly increased number of requests. We have also experienced increases in our printing, long-distance telephone, facsimile and postage costs. The Chairman's office expects to receive over 10,000 letters this year all which require a response.

To improve accountability in our grant making process, we have proposed many changes which will have a financial impact on the Agency. Specifically, we have strengthened our panel process by expanding the number of panelists, the duration of meetings, achieving greater professional, ethnic and geographic diversity. Additionally, we initiated a process of bringing panel chairmen to meetings of National Council on the Arts for grant application review.

An article that appeared in the May 2, 1990, edition of The Washington Post indicated that you believe that the language in the FY 1990 bill and conference report is unconstitutional.

QUESTION: Is this story accurate?

ANSWER: No. The Endowment's General Counsel testified that several constitutional law scholars had raised questions about the constitutionality with respect to certain aspects of the prohibition. The General Counsel stated that she shared certain of the concerns that some courts could find fault with portions of the prohibition.

In any event, the Endowment has recently released guidance interpreting the prohibition as embodying the standard of obscenity set forth by the Supreme Court in Miller v. California. This guidance dispels any questions with respect to the constitutionality of the prohibition.

QUESTION: If so, could you please outline to the Subcommittee your reasons for believing that this language is unconstitutional?

ANSWER: *See* Answer to previous question.

QUESTION: If you believe that the language is unconstitutional, why have you attempted to comply with it?

ANSWER: *See* answers to the two previous questions. Additionally, in accordance with my oath of office, I try to obey and enforce the law as well as possible.

QUESTION: To your knowledge, have any lawsuits been filed which challenge the FY 1990 language?

ANSWER: Yes, we are aware of two lawsuits which challenge the FY 1990 language. One suit has been filed in the Southern District of New York challenging the constitutionality of the prohibition, as well as the Endowment decision to include the prohibition as a term and condition for the receipt of federal funds. That suit was filed by the New School for Social Research which was awarded a $45,000 grant for the design and construction of a sculpture garden. The other suit has been filed in the Central District of California by the Bella Lewitsky Dance Foundation, which had been awarded a grant of $72,000 to assist the Company in developing new dance works and to upgrade the development of the Foundation's artists. This lawsuit also challenges the inclusion of the prohibition as a term and condition of receiving federal funds as well as the Endowment's authority to decide what is or is not obscene.

QUESTION: If so, how many an by whom?

ANSWER: See answer to previous question.

RELIGIOUS ART

The Endowment was criticized recently by various media figures with regard to its involvement and interest in funding works of art with religious themes.

QUESTION: Just so we can set the record straight, do you fund projects with religious themes?

ANSWER: Yes.

QUESTION: If so, can you provide the Subcommittee some examples of these grants, and the dollar amounts of each?

ANSWER: Attachment B-1 is a sampling of grants made in recent years with a religious theme.

ARTS IN EDUCATION

You have requested an additional $2.0 million in FY 91 (+36 percent) for the Arts in Education Program (pg. 105). The majority of these funds are requested for Special Projects.

QUESTION: Why have you put such an increased emphasis on Special Projects over the other two categories in this program (Arts in Schools and State Arts in Education)?

ANSWER: Special Projects would get a greater percentage increase because of the inclusion of the new initiative ($1.15 million) within the category. We seek to increase support to all three categories to develop a comprehensive arts education program.

QUESTION: What type of grant which was not funded in previous years will be funded with these additional funds?

ANSWER: The new funds will allow us to target a special area of interest -- arts education within cultural institutions. While we have been able to fund some grants like this in the past, we have not been able to focus our resources towards significant change in this area. In other words, the pressure on our Special Projects category has been so great that the AIE program could not limit its choice of projects to those within cultural institutions or those which encouraged long-term collaborations between the discipline organizations and schools. This initiative will allow us to do so -- and thus begin to forge important new links between educators, art instructors, and individual artists. It is a belief that projects with wide community support and cooperation of numerous groups will be most successful and enduring.

LITERATURE

With the publication of the Return of the River of No Return, the town of Salmon, Idaho experienced the satisfaction of authorship. The book, written by the students of Salmon, contains hundreds of poems written by the students of Salmon. At the year-end poetry recitation, the school auditorium was filled to overflowing, and hundreds of parents stood in the corridors and halls to listen to the children read their work.

The impetus for this effort was a year long Endowment residency by two gifted poet-teachers.

QUESTION: Is this type of success typical of Endowment activities?

ANSWER: Yes, Many projects supported by the Arts Endowment enable writers to present public programs. Through Audience Development grants, the Literature Program supports Residencies for Writers and Reading Series, Audience Development Projects, and Literary Centers. Central to each of these categories is the goal of increasing the audience not only for the specific writers featured in Endowment-funded programming, but for contemporary literature in general. The effect of a residency program can sometimes touch a community for years afterwards, especially if a written chronicle or piece of visual art is created.

QUESTION: How can this type of success be duplicated in other rural areas? urban areas?

ANSWER: The following are three examples of model projects made to state arts agencies which address the needs of urban and rural populations while still forwarding the goals of the Audience Development category:

- In FY 89, a grant of $10,000 was awarded to the Washington State Arts Commission to support "Across State Lines," a joint project with the Oregon Arts Commission. The project presented twenty writers in ten readings in the underserved rural areas of the two states. Local arts agencies served as hosts, selected on the basis of rural location, interest, and the ability to provide travel, lodging, and promotional materials for the writers.
- In FY 88, a grant of $10,000 was awarded to the Wyoming Council on the Arts to support a statewide residency series. Residencies of one week each were planned to include workshops, readings, and individual work with local writers. Local sponsors included arts councils, chambers of commerce, libraries, colleges, and universities. Writers were chosen regionally and nationally, affording local teachers and writers exposure to new ideas.
- In FY 89, a grant of $4,600 was awarded to the South Carolina Arts Commission to support the South Carolina Fiction Project. The Fiction Project selects twelve short stories from South Carolina writers to be published in the magazine section of The State newspaper in Columbia; The State has a statewide readership of over one million. Manuscripts are first screened by a local panel, and then final selections are made by two nationally known writers from out of state and the assistant features editor of the newspaper. Publication has brought contemporary fiction into many homes, as well as valuable exposure for the featured writers.

ARTS IN RURAL AREAS

I am concerned that the year-long controversy surrounding the NEA and its grant-making process has, for countless Americans, obscured the purpose of the Endowment's mission. I do not think it would be inaccurate to say that most people now associate the NEA with controversial art exhibits in New York, Washington, Chicago, and other large cities.

QUESTION: What efforts are you making to ensure that rural areas are maintaining an adequate exposure to the arts, and NEA's work in particular?

ANSWER: We are currently evaluating Endowment activity in rural areas and plan to strengthen those programs already having a positive impact in rural communities and to develop strategies addressing gaps in our current efforts. A replication of the 1992 National Survey of Public Participation in the Arts, is being carried out by our Research Division, it will assist in identifying possible methods of increasing exposure to NEA's work in rural areas.

QUESTION: Can you provide the Subcommittee with a list of the number of grants that have been awarded in FY 1990 to rural communities, and the total dollar figure of these grants?

ANSWER: With FY 90 grants still being awarded, we have not completed an analysis of our grantees. However, we can provide you with illustrative examples of grants awarded to rural communities in FY 89 (See attachment C-1).

QUESTION: Does your FY 1991 budget request include any new programs which will promote artistic endeavors in rural communities?

ANSWER: Yes. To help small and rural towns solve local design problems, our Design Arts Program will be awarding project grants for Rural and Small Communities in FY 91 to support design projects in towns outside standard metropolitan statistical areas and with populations of less than 50,000.

NEA/NEH REAUTHORIZATION

There have been many rumors circulating concerning various approaches that may be taken by Congress to amend the functions of the Endowment in conjunction with the NEA/NEH reauthorizing legislation.

One concept involves splitting the Endowment in two. One would be a federally funded agency responsible for administering arts education programs and subsidizing admission fees to arts institutions. The other would be a privately funded organization which would support the creation of new art.

QUESTION:	What is your opinion of this type of arrangement?
ANSWER:	I believe that the Endowment works well within its current structure. It is essential to the growth and direction of the arts in this country that there be one central voice at the national level to develop, guide and oversee arts policy.
QUESTION:	Does it make sense to split arts education off from the creation of art?
ANSWER:	No. It would be impossible to separate arts education from the creation of art. They are two components of a deliberate and thorough national arts policy and, as such, should not be separated.
QUESTION:	What is your opinion of the State Arts Agencies' proposal to increase the state agencies' share of NEA grant money from 20 percent to 60 percent?
ANSWER:	I oppose it. While such a concept was considered by the board of NASAA and circulated among its membership,to our knowledge it was not advanced as a formal proposal. In fact, many state arts agencies expressed their disapproval of the concept, and NASAA - in accordance with the wishes of its members - has joined other elements of the arts community in advocating reauthorization of the Arts Endowment without any change in the state arts agencies' mandated share of program funds. NASAA and other elements of the arts community also advocate a reexamination of the roles which the Endowment's public partners (federal, states, and local) can play. The Arts Endowment would welcome such a reexamination.

We believe that an increase in state art agencies' share to as much as 60 percent would be detrimental to the arts in America for the following reasons:

- Decentralization of large amounts of federal funding could encourage state legislatures to decrease state appropriations for the arts;
- A great country like the United States should have a strong national cultural presence as a part of its national policy to promote American ideas and accomplishments world wide.
- Decentralization of federal programs to 56 state agencies would inevitably involve much duplication of costs and require increased use of tax dollars for administration, thereby further reducing funds available for the arts;
- Many state arts agencies lack the staff capability or program structure to effectively handle a large influx

of new federal funds or the added responsibilities that these funds would carry;

-- The arts in America have benefited from a plurality of funding sources. With access to federal, state, and local funds, our best artists and arts organizations have been able to avoid over-dependence on any single source of public support. The existence of a plurality of funding sources also gives artists and organizations a much greater range of opportunities for support. With the transfer of most federal arts funds to the states, a major strength of our system would be lost;

-- Federal leadership has been critical in assisting and encouraging the state arts agencies to develop programs of support for rural, minority, and traditional artists. These groups and others lack the kind of institutional base sometimes needed to successfully compete for support at the state level. Without a continuing federal role, programs in these areas would be endangered;

-- Only a federal agency can provide the national recognition that can greatly encourage an artist of give a boost to an arts organization's efforts to raise private funds;

-- State arts agencies cannot individually develop and support projects intended for a nation-wide audience, such as Dance in America, American Playhouse, or Great Performances;

-- State arts agencies do not, by their nature, have the national mandate or perspective needed to identify and support our national treasures.

QUESTION: Will this approach eliminate future "Mapplethorpe-type" controversies, or will it just shift the controversies to the states and local communities?

ANSWER: It would not eliminate future controversies nor does it even speak to that problem, with such a disorientation of the grant giving structure I suspect it would increase the potential for controversial grants, if anything.

In this morning's edition of the The Washington Post, a front page story appeared which said that the White House is now supporting a one-year reauthorization of the Endowment instead of a five-year reauthorization.

QUESTION: Is the Endowment supporting a one year reauthorization?

ANSWER: Both the White House and the Endowment seek a five year reauthorization. If, However, the Independent Commission requires more time to complete its recommendations, we would favor a shorter extension - of 3 or even 1 year - to give the commission adequate time. It now appears that the Commission will complete its work by October 1, 1990.

Mr. Frohnmayer, last month during a meeting of the National Council on the Arts, several controversial "solo performance" grant requests were rejected for funding. The Council has been criticized for this action by some and praised by others.

QUESTION: I'm not sure enough is known about how the Council operates, what its mission is and how certain grant requests are "flagged" for special consideration or scrutiny. Can you spend a few minutes explaining more about this process and what the Council's procedures are?

ANSWER: The National Council on the Arts is charged by law to advise the Chairman of the Endowment "with respect to policies, programs, and procedures" and to "review applications for financial assistance and make recommendations thereon" to the Chairman prior to final decision. The Council meets four times a year to carry out these responsibilities. In reviewing advisory panel recommendations with respect to grant applications, the Council may have brought to its specific attention applications that the Chairman may feel warrant special consideration. In reviewing these applications, the Council may have available to it more detailed information for some applications and/or may hear directly from a representative of the particular panel that recommended said application for funding (or for rejection). The Council generally has a fuller discussion of these applications prior to making its own recommendation to the Chairman, who then makes the final decision.

FIRST AMENDMENT

QUESTION: Is it your understanding that First Amendment guarantees of the freedom of expression apply to commercial speech, for instance the advertising of a product?

ANSWER: For the answers to this and other First Amendment questions, I am relying on information provided by the Endowment General Counsel's Office. Under the First Amendment, commercial speech "receives a limited form of First Amendment protection so long as it concerns a lawful activity and is not misleading or fraudulent." Posadas de Puerto Rico Associates v. Tourism Co. of Puerto Rico, 478 U.S. 328, 340 (1986). See also Board of Trustees of State University of New York v. Fox, 109 S.Ct. 3028, 3033 (1989); Central Hudson Gas & Electric Corp. v. Public Service Comm'n of New York, 447 U.S. 557, 566 (1980).

QUESTION: Is it your understanding that First Amendment guarantees of freedom of expression apply to religious speech, for instance in the advocacy of religious dogma?

ANSWER: The First Amendment's guarantee of freedom of speech protects religious speech and expression on the same terms as it protects speech on any other subject. See, e.g., Widmar v. Vincent, 454 U.S. 263 (1981); Jamison v. Texas, 318 U.S. 413 (1943); Cantwell v. Connecticut, 310 U.S. 296 (1940). Moreover, under the religion clauses of the First Amendment, government may not bar persons from government programs on the basis of their religious beliefs, expression, or identity. See McDaniel v. Paty, 435 U.S. 618 (1978); Larson V. Valente, 456 U.S. 228, 245 (1982); Fowler V. Rhode Island, 345 U.S. 67, 69 (1953); Everson v. Board of Education, 330 U.S. 1, 16 (1947). While government may not act with the purpose or effect of preferring religious expression over non-religious expression, cf. Texas Monthly, Inc. v. Bullock, 109 S. Ct. 890 (1989), this does not mean that government must -- or may -- exclude religious persons, activities, or expression from eligibility for government benefits for which they would otherwise be eligible. Bowen v. Kendrick, 487 U.S. 599 (1988); Witters v. Washington Department of Services, 474 U.S. 481 (1986); see Widmar v. Vincent, 454 U.S. 263 (1981).

QUESTION: Is it your understanding that First Amendment guarantees of freedom of expression apply to political speech, for instance in the advocacy of a particular candidate for office?

ANSWER: The Supreme Court has identified political speech as one of the "most fundamental First Amendment activities." Buckley v. Valeo, 424 U.S. 1, 14 (1976). In Buckley, the Court quoted

Monitor Patriot Co. v. Roy, as follows: "it can hardly be doubted that the constitutional guarantee has its fullest and most urgent application precisely to the conduct of campaigns for political office." 401 U.S. 265, 272 (1971).

QUESTION: Then, would you consider it proper for the federal government to fund an art project that is part of an advertising campaign for a particular product or which is proselytization for a particular religious sect or is part of a particular political campaign, even if that art project had the approval of a national, state or local review panel?

ANSWER: I begin with the proposition that promoting artistic excellence is our primary task. Whether funding of such projects is "proper" or "improper" is a policy question to be determined by Congress. We do not believe that it is unconstitutional for such projects to be funded, based upon neutral, objective criteria. The Endowment's enabling statute, 20 U.S.C. Sec. 954(c), provides broad latitude in the projects that the Endowment is authorized to fund. Criteria identified in the statute for selection of projects and productions to be funded include "substantial artistic and cultural significance," projects reflecting "American creativity and cultural diversity," "professional excellence," projects "of significant merit" which would not otherwise be available to many citizens for geographic or economic reasons, projects of "substantial artistic and cultural significance" that reach or reflect the culture of a minority, inner city, rural or tribal community, and projects that "encourage public knowledge understanding, and appreciation of the arts." If a project that was also part of a campaign of commercial, religious, or political advocacy were found meritorious under these criteria it could be selected for funding under current statutory criteria.

QUESTION: Then, do you believe that it is improper for the government to fund some forms of artistic expression even though they are protected by the First Amendment? Why?

ANSWER: *See* Answer to previous question.

QUESTION: Is there any circumstance in which the failure of government to pay for a particular art project amounts to censorship? (If no, then ask: Is the use of such terminology not utterly inappropriate and intellectually dishonest in addressing the concerns surrounding the National Endowment for the Arts.)

ANSWER: A government decision not to pay for a particular art project is not censorship in the sense in which the term is generally used. There is a distinction between judgments about what projects to fund and government *prohibition* of protected artistic expression. The term "censorship" should be considered to apply only to the latter.

QUESTION: Do you consider it censorship for the government to refuse to sponsor any art project for any reason whatsoever?

ANSWER: *See* Answer to previous question.

QUESTION: Do you see a distinction between barring the publication or production of a work of art and refraining from paying for that art?

ANSWER: Yes. Under the First Amendment, the circumstances in which expression may be *barred* are extremely limited. However, the mere fact that a particular category of expression is protected by the First Amendment or cannot be barred absent a compelling interest, does not necessarily mean that the government must include such expression within a general grant program funding other types of First Amendment expression. Regan v. Taxation with Representation, 461 U.S. 540 (1983); Buckley v. Valeo, 424 U.S. 1, 93-95 (1976); Cammarano v. United States, 358 U.S. 498 (1959); but cf. Arkansas Writer's Project v. Ragland, 481 U.S. 221 (1987); Speiser v. Randall, 357 U.S. 513 (1958). Moreover because resources are limited, the Endowment must make judgments concerning which projects, of those which satisfy all relevant statutory criteria, are most deserving of government funds under those statutuory criteria.

QUESTION: Is it your view that the First Amendment entitles every artist to public funding and requires that taxpayers pay for whatever that artist calls art?

ANSWER: No. Clearly, the First Amendment does not require the government to fund any art at all. Accordingly, there is no affirmative constitutional entitlement of an artist to receive public funding. We believe that even where the government has created a grant program for funding private artistic expression, it need not pay for whatever an artist calls art, but may make certain subject matter, quality, and aesthetic judgments. See Answer to previous question.

During FY 1989, the NEA received 17,879 applications for funding. The Endowment approved 4,372 of these and rejected 13,507 applications.

QUESTION: If an artist's application for a grant is rejected by a review panel and he is denied federal funding, does that, in your view, constitute censorship?

ANSWER: No. As answered in a previous question, a government decision not to pay for a particular art project is not censorship in the sense in which the term is generally used. There is a distinction between judgments about what projects to fund and government prohibition of protected artistic expression.

QUESTION: As I just indicated, the NEA chose not to fund some 13,507 proposed arts projects. Were any of these proposals rejected for being utterly without artistic merit?

ANSWER: It would be impossible to respond categorically to this question without first examining the record on each of those applications, but it seems unlikely that they were rejected for being utterly without artistic merit since the Endowment's mandate, procedures and guidelines all suggest and encourage valid projects. More likely the rejections are a matter of lower merit and/or lack of overall competitiveness for available funds.

QUESTION: If one of the proposals which were rejected for being without artistic merit is in fact produced and sold to a private purchaser, is that not evidence that the work actually had artistic merit?

ANSWER: We assume this question directs itself to a proposal to carry out a particular project; said proposal, presumably, is rejected by the Endowment for being of lower merit and is subsequently funded elsewhere, resulting in work of some sort which is then bought by someone in the private sector. Individual purchasers may secure work for a variety of reasons: because they personally like it, or a family member does, or they think it may take on greater value later, or whatever. Such work might indeed have artistic merit, though that is not necessarily the case.

QUESTION: Of the 4,372 works which did receive taxpayer funding, is it your opinion that any of them might have been produced and paid for entirely with private funds?

ANSWER: The Arts Endowment made over 4,000 grants, which is different from works. For instance, a grant to a symphony orchestra is not a work, it is an ensemble of musicians performing throughout a season. A very small proportion of our grants might be said to result in work "that might have been produced and paid for entirely with private funds." We can support only not-for-profit tax-exempt groups, public agencies, and individuals, most of whom carry out activity that throughout history has needed support from a variety of sources. Among that array of applicants and grantees, it seems likely that a relatively small proportion, at best, might carry forward their activities over time solely with private funds.

QUESTION: If some of them would not have, is that an indication that they were lacking in artistic merit? Why?

ANSWER: Organizations and individuals engaged in artistic and cultural activity have, in large measure, not been able to carry out their activity without some amount of support. This has been true throughout history and in all developed nations and civilizations. Clearly some of these groups and individuals do work that is of much less merit than others. But some of the movies, for example, or books, or records, that are produced and paid for entirely with private funds are felt by many to be lacking artistic merit. The reverse is also true.

QUESTION: Is it your view that the commercial salability of any work of art is not a relevant criterion of its artistic merit?

ANSWER: As noted earlier, the commercial salability of any work of art, in our view, might or might not be a relevant criterion of its artistic merit. The great symphonic works of music, for example, are performed by orchestras that are not "salable." And history is replete with tales of artists whose work was ignored or reviled during their lifetimes.

QUESTION: What, then, are the criteria of artistic merit?

ANSWER: The criteria of artistic merit will differ from art form to art form. For orchestras, as one example, the artistic criteria would include considerations of ensemble (how well the musicians play together), intonation, balance, overall sound, and vitality. (Other criteria include repertoire, balance of programming, effectiveness of outreach in community, financial responsibility and organizational stability.)

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Chairman Frohnmayer, I am very pleased to have you before the Committee today and am even more pleased that you are going to be visiting New Mexico in August. Santa Fe is the third largest art market in the country, we have a good symphony in Albuquerque and a fine Opera in Santa Fe. When I've met with artists in New Mexico they have expressed a concern that the NEA has an East Coast bias and that rural areas are under-represented on the NEA boards.

QUESTION: Would you explain the efforts that the NEA makes to reach out to rural areas like New Mexico?

ANSWER: Attachment C-1 list of illustrates FY 89 grants made to rural communities. The Endowment endeavors in New Mexico as well as all states, to support activities that work toward preserving and encouraging art forms that are an integral part of rural communities.

QUESTION: Another concern of the artists, is New Mexico's pending legislation to ban cadmium paints. (S.1112, a Chafee. Solid Waste Source Reduction and Recycling Act) I am told these pigments are very important materials for artists because of the pigments' bright color, opacity, intensity and color-fast qualities. Could you tell me NEA's position on this legislation?

ANSWER: The Endowment has no position on this legislation.

QUESTION: The NEA in the past has supported the Albuquerque Symphony. This symphony travels all over the state to give concerts. For many young people in New Mexico, the Albuquerque Symphony is the first and often only exposure they get to a symphony. However, this year the Albuquerque Symphony finds itself in very serious financial trouble. Does the NEA have emergency grants available to help performing arts groups like our symphony get through a financial emergency--like when a major, pledged contribution does not materialize and the result is a significant budget shortfall?

ANSWER: The Arts Endowment generally does not provide grants to organizations finding themselves in financial difficulty. There are several reasons for this: many arts organizations, of all sizes and in all parts of the country have financial problems, to varying degrees of seriousness, from year to year. Some of these problems might have been avoided by better planning and management, but others are indeed the result of unforeseen and unforeseeable circumstances. The particularity of each case can be difficult to assess, as can possible solutions. The Endowment's budget could conceivably go entirely toward trying to cover financial crises of various kinds, but that is not the agency's mission nor, the most productive use of Federal arts support. Larger grants would of themselves help some of these situations, though the agency's budget generally constrains grant amounts. The New Mexico Symphony is indeed a valuable resource, and received grants of $60,000 last year and this year. Its Manager has served on our panel as well. Regrettably our policies and resources suggest that crisis funding is probably not appropriate nor feasible at this time.

ATTACHMENT A-1

Table 1

. 60% OF PROGRAM FUNDS DISTRIBUTED BY CURRENT FORMULA

	TOTAL POPULATION	POP. SHARE	EQUAL SHARE	PROJECTED GRANT	FY 90 BSG
ALABAMA	4,084	$155,747	$1,073,269	$1,229,000	$390,000
ALASKA	526	$20,060	$1,073,269	$1,093,000	$349,000
ARIZONA	3,384	$129,052	$1,073,269	$1,202,000	$383,000
ARKANSAS	2,388	$91,069	$1,073,269	$1,164,000	$371,000
CALIFORNIA	27,663	$1,054,956	$1,073,269	$2,128,000	$669,000
COLORADO	3,296	$125,696	$1,073,269	$1,199,000	$381,000
CONNECTICUT	3,212	$122,493	$1,073,269	$1,196,000	$380,000
DELAWARE	644	$24,560	$1,073,269	$1,098,000	$351,000
D OF C	622	$23,721	$1,073,269	$1,097,000	$350,000
FLORIDA	12,024	$458,547	$1,073,269	$1,532,000	$485,000
GEORGIA	6,222	$237,282	$1,073,269	$1,311,000	$416,000
HAWAII	1,083	$41,301	$1,073,269	$1,115,000	$356,000
IDAHO	999	$38,098	$1,073,269	$1,111,000	$355,000
ILLINOIS	11,583	$441,729	$1,073,269	$1,515,000	$477,000
INDIANA	5,531	$210,930	$1,073,269	$1,284,000	$407,000
IOWA	2,835	$108,116	$1,073,269	$1,181,000	$376,000
KANSAS	2,476	$94,425	$1,073,269	$1,168,000	$372,000
KENTUCKY	3,727	$142,133	$1,073,269	$1,215,000	$386,000
LOUISIANA	4,461	$170,125	$1,073,269	$1,243,000	$394,000
MAINE	1,187	$45,267	$1,073,269	$1,119,000	$357,000
MARYLAND	4,534	$172,909	$1,073,269	$1,246,000	$396,000
MASSACHUSETTS	5,856	$223,324	$1,073,269	$1,297,000	$411,000
MICHIGAN	9,200	$350,851	$1,073,269	$1,424,000	$449,000
MINNESOTA	4,246	$161,925	$1,073,269	$1,235,000	$393,000
MISSISSIPPI	2,624	$100,069	$1,073,269	$1,173,000	$373,000
MISSOURI	5,103	$194,608	$1,073,269	$1,268,000	$402,000
MONTANA	809	$30,852	$1,073,269	$1,104,000	$352,000
NEBRASKA	1,595	$60,827	$1,073,269	$1,134,000	$361,000
NEVADA	1,007	$38,403	$1,073,269	$1,112,000	$355,000
NEW HAMPSHIRE	1,057	$40,310	$1,073,269	$1,114,000	$356,000
NEW JERSEY	7,672	$292,579	$1,073,269	$1,366,000	$432,000
NEW MEXICO	1,500	$57,204	$1,073,269	$1,130,000	$360,000
NEW YORK	17,826	$679,812	$1,073,269	$1,753,000	$549,000
NORTH CAROLINA	6,412	$244,528	$1,073,269	$1,318,000	$418,000
NORTH DAKOTA	672	$25,627	$1,073,269	$1,099,000	$351,000
OHIO	10,784	$411,259	$1,073,269	$1,485,000	$468,000
OKLAHOMA	3,273	$124,819	$1,073,269	$1,198,000	$380,000
OREGON	2,724	$103,882	$1,073,269	$1,177,000	$375,000
PENNSYLVANIA	11,937	$455,229	$1,073,269	$1,528,000	$481,000
PUERTO RICO	3,720	$141,866	$1,073,269	$1,215,000	$381,000
RHODE ISLAND	986	$37,602	$1,073,269	$1,111,000	$354,000
SOUTH CAROLINA	3,423	$130,540	$1,073,269	$1,204,000	$383,000
SOUTH DAKOTA	709	$27,038	$1,073,269	$1,100,000	$351,000
TENNESSEE	4,855	$185,150	$1,073,269	$1,258,000	$399,000
TEXAS	16,785	$640,113	$1,073,269	$1,713,000	$537,000
UTAH	1,680	$64,068	$1,073,269	$1,137,000	$363,000
VERMONT	548	$20,899	$1,073,269	$1,094,000	$349,000
VIRGINIA	5,904	$225,155	$1,073,269	$1,298,000	$412,000
WASHINGTON	4,539	$173,099	$1,073,269	$1,246,000	$397,000
WEST VIRGINIA	1,898	$72,382	$1,073,269	$1,146,000	$365,000
WISCONSIN	4,807	$183,320	$1,073,269	$1,257,000	$399,000
WYOMING	490	$18,687	$1,073,269	$1,092,000	$349,000
AMERICAN SAMOA	35	$1,335	$200,000	$201,000	$200,000
GUAM	120	$4,576	$200,000	$205,000	$201,000
N. MARIANAS	19	$725	$200,000	$201,000	$200,000
VIRGIN ISLANDS	108	$4,119	$200,000	$204,000	$201,000
TOTAL	247,404	$9,435,000	$56,609,988	$66,043,000	$21,508,000

Table 2

60% OF PROGRAM FUNDS DISTRIBUTED BY CURRENT FORMULA
PROJECTED IMPACT ON OVERALL FUNDING BY STATE

	PROJECTED STATE ARTS AGENCY GRANT	PROJECTED SHARE OF OTHER GRANTS	PROJECTED TOTAL	89 TOTAL	DIFFERENCE
ALABAMA	$1,229,000	$514,793	$1,743,793	$1,233,100	$510,693
ALASKA	$1,093,000	$323,398	$1,416,398	$877,900	$538,498
ARIZONA	$1,202,000	$716,646	$1,918,646	$1,556,468	$362,178
ARKANSAS	$1,164,000	$51,138	$1,215,138	$451,950	$763,188
CALIFORNIA	$2,128,000	$9,362,603	$11,490,603	$16,031,944	($4,541,341)
COLORADO	$1,199,000	$533,855	$1,732,855	$1,255,394	$477,461
CONNECTICUT	$1,196,000	$1,584,421	$2,780,421	$2,979,035	($198,614)
DELAWARE	$1,098,000	$116,165	$1,214,165	$538,700	$675,465
D OF C	$1,097,000	$3,480,918	$4,577,918	$6,062,385	($1,484,467)
FLORIDA	$1,532,000	$837,155	$2,369,155	$1,855,300	$513,855
GEORGIA	$1,311,000	$1,181,855	$2,492,855	$2,353,170	$139,685
HAWAII	$1,115,000	$333,300	$1,448,300	$900,155	$548,145
IDAHO	$1,111,000	$68,029	$1,179,029	$463,679	$715,350
ILLINOIS	$1,515,000	$2,652,651	$4,167,651	$4,829,675	($662,024)
INDIANA	$1,284,000	$662,649	$1,946,649	$1,492,825	$453,824
IOWA	$1,181,000	$392,597	$1,573,597	$1,018,500	$555,097
KANSAS	$1,168,000	$322,454	$1,490,454	$899,350	$591,104
KENTUCKY	$1,215,000	$1,017,372	$2,232,372	$2,054,150	$178,222
LOUISIANA	$1,243,000	$414,560	$1,657,560	$1,073,555	$584,005
MAINE	$1,119,000	$283,316	$1,402,316	$820,100	$582,216
MARYLAND	$1,246,000	$1,424,162	$2,670,162	$2,734,450	($64,288)
MASSACHUSETTS	$1,297,000	$2,963,901	$4,260,901	$5,286,633	($1,025,732)
MICHIGAN	$1,424,000	$1,038,564	$2,462,564	$2,152,940	$309,624
MINNESOTA	$1,235,000	$4,345,945	$5,580,945	$7,524,440	($1,943,495)
MISSISSIPPI	$1,173,000	$112,924	$1,285,924	$556,380	$729,544
MISSOURI	$1,268,000	$1,025,882	$2,293,882	$2,084,120	$209,762
MONTANA	$1,104,000	$238,695	$1,342,695	$741,849	$600,846
NEBRASKA	$1,134,000	$425,899	$1,559,899	$1,058,170	$501,729
NEVADA	$1,112,000	$132,673	$1,244,673	$569,800	$674,873
NEW HAMPSHIRE	$1,114,000	$268,026	$1,382,026	$793,000	$589,026
NEW JERSEY	$1,366,000	$759,702	$2,125,702	$1,677,150	$448,552
NEW MEXICO	$1,130,000	$862,801	$1,992,801	$1,774,401	$218,400
NEW YORK	$1,753,000	$24,089,955	$25,842,955	$40,094,830	($14,251,875)
NORTH CAROLINA	$1,318,000	$723,495	$2,041,495	$1,602,712	$438,783
NORTH DAKOTA	$1,099,000	$82,595	$1,181,595	$484,590	$697,005
OHIO	$1,485,000	$1,850,889	$3,335,889	$3,504,478	($168,589)
OKLAHOMA	$1,198,000	$207,208	$1,405,208	$719,159	$686,049
OREGON	$1,177,000	$694,303	$1,871,303	$1,511,790	$359,513
PENNSYLVANIA	$1,528,000	$3,407,732	$4,935,732	$6,074,240	($1,138,508)
PUERTO RICO	$1,215,000	$128,713	$1,343,713	$590,300	$753,413
RHODE ISLAND	$1,111,000	$270,584	$1,381,584	$796,200	$585,384
SOUTH CAROLINA	$1,204,000	$971,801	$2,175,801	$1,976,340	$199,461
SOUTH DAKOTA	$1,100,000	$76,259	$1,176,259	$474,190	$702,069
TENNESSEE	$1,258,000	$390,246	$1,648,246	$1,037,640	$610,606
TEXAS	$1,713,000	$2,512,296	$4,225,296	$4,660,264	($434,968)
UTAH	$1,137,000	$957,121	$2,094,121	$1,931,240	$162,881
VERMONT	$1,094,000	$221,873	$1,315,873	$711,233	$604,640
VIRGINIA	$1,298,000	$756,597	$2,054,597	$1,651,054	$403,543
WASHINGTON	$1,246,000	$1,117,955	$2,363,955	$2,228,270	$135,685
WEST VIRGINIA	$1,146,000	$109,282	$1,255,282	$542,400	$712,882
WISCONSIN	$1,257,000	$935,615	$2,192,615	$1,932,935	$259,680
WYOMING	$1,092,000	$327,296	$1,419,296	$883,300	$535,996
AMERICAN SAMOA	$201,000	$11,330	$212,330	$218,600	($6,270)
GUAM	$205,000	$17,452	$222,452	$229,650	($7,198)
N. MARIANAS	$201,000	$4,264	$205,264	$207,000	($1,736)
VIRGIN ISLANDS	$204,000	$6,092	$210,092	$211,000	($908)
TOTAL	$66,043,000	$78,320,000	$144,363,000	$149,974,083	($5,611,083)

Table 3

50% OF PROGRAM FUNDS DISTRIBUTED BY CURRENT FORMULA

PROJECTED IMPACT ON OVERALL FUNDING BY STATE

	PROJECTED STATE ARTS AGENCY GRANT	PROJECTED SHARE OF OTHER GRANTS	PROJECTED TOTAL	89 TOTAL	DIFFERENCE
ALABAMA	$1,229,000	$683,275	$1,912,275	$1,291,000	$679,275
ALASKA	$1,093,000	$491,880	$1,584,880	$935,900	$706,980
ARIZONA	$1,202,000	$885,128	$2,087,128	$1,614,468	$530,660
ARKANSAS	$1,164,000	$219,620	$1,383,620	$509,950	$931,670
CALIFORNIA	$2,128,000	$9,531,085	$11,659,085	$16,089,944	($4,372,859)
COLORADO	$1,199,000	$702,337	$1,901,337	$1,313,394	$645,943
CONNECTICUT	$1,196,000	$1,752,903	$2,948,903	$3,037,035	($30,132)
DELAWARE	$1,098,000	$284,647	$1,382,647	$596,700	$843,947
D OF C	$1,097,000	$3,649,400	$4,746,400	$6,120,385	($1,315,985)
FLORIDA	$1,532,000	$1,005,637	$2,537,637	$1,913,300	$682,337
GEORGIA	$1,311,000	$1,350,337	$2,661,337	$2,411,170	$308,167
HAWAII	$1,115,000	$501,782	$1,616,782	$958,155	$716,627
IDAHO	$1,111,000	$236,511	$1,347,511	$521,679	$883,832
ILLINOIS	$1,515,000	$2,821,133	$4,336,133	$4,887,675	($493,542)
INDIANA	$1,284,000	$831,131	$2,115,131	$1,550,825	$622,306
IOWA	$1,181,000	$561,079	$1,742,079	$1,076,500	$723,579
KANSAS	$1,168,000	$490,936	$1,658,936	$957,350	$759,586
KENTUCKY	$1,215,000	$1,185,854	$2,400,854	$2,112,150	$346,704
LOUISIANA	$1,243,000	$583,042	$1,826,042	$1,131,555	$752,487
MAINE	$1,119,000	$451,798	$1,570,798	$878,100	$750,698
MARYLAND	$1,246,000	$1,592,644	$2,838,644	$2,792,450	$104,194
MASSACHUSETTS	$1,297,000	$3,132,383	$4,429,383	$5,344,633	($857,250)
MICHIGAN	$1,424,000	$1,207,046	$2,631,046	$2,210,940	$478,106
MINNESOTA	$1,235,000	$4,514,427	$5,749,427	$7,582,440	($1,775,013)
MISSISSIPPI	$1,173,000	$281,406	$1,454,406	$614,380	$898,026
MISSOURI	$1,268,000	$1,194,364	$2,462,364	$2,142,120	$378,244
MONTANA	$1,104,000	$407,177	$1,511,177	$799,849	$769,328
NEBRASKA	$1,134,000	$594,381	$1,728,381	$1,116,170	$670,211
NEVADA	$1,112,000	$301,155	$1,413,155	$627,800	$843,355
NEW HAMPSHIRE	$1,114,000	$436,508	$1,550,508	$851,000	$757,508
NEW JERSEY	$1,366,000	$928,184	$2,294,184	$1,735,150	$617,034
NEW MEXICO	$1,130,000	$1,031,283	$2,161,283	$1,832,401	$386,882
NEW YORK	$1,753,000	$24,258,437	$26,011,437	$40,152,830	($14,083,393)
NORTH CAROLINA	$1,318,000	$891,977	$2,209,977	$1,660,712	$607,265
NORTH DAKOTA	$1,099,000	$251,077	$1,350,077	$542,590	$865,487
OHIO	$1,485,000	$2,019,371	$3,504,371	$3,562,478	($107)
OKLAHOMA	$1,198,000	$375,690	$1,573,690	$777,159	$854,531
OREGON	$1,177,000	$862,785	$2,039,785	$1,569,790	$527,995
PENNSYLVANIA	$1,528,000	$3,576,214	$5,104,214	$6,132,240	($970,026)
PUERTO RICO	$1,215,000	$297,195	$1,512,195	$590,300	$921,895
RHODE ISLAND	$1,111,000	$439,066	$1,550,066	$854,200	$753,866
SOUTH CAROLINA	$1,204,000	$1,140,283	$2,344,283	$2,034,340	$367,943
SOUTH DAKOTA	$1,100,000	$244,741	$1,344,741	$532,190	$870,551
TENNESSEE	$1,258,000	$558,728	$1,816,728	$1,095,640	$779,088
TEXAS	$1,713,000	$2,680,778	$4,393,778	$4,718,264	($266,486)
UTAH	$1,137,000	$1,125,603	$2,262,603	$1,989,240	$331,363
VERMONT	$1,094,000	$390,355	$1,484,355	$769,233	$773,122
VIRGINIA	$1,298,000	$925,079	$2,223,079	$1,709,054	$572,025
WASHINGTON	$1,246,000	$1,286,437	$2,532,437	$2,286,270	$304,167
WEST VIRGINIA	$1,146,000	$277,764	$1,423,764	$600,400	$881,364
WISCONSIN	$1,257,000	$1,104,097	$2,361,097	$1,990,935	$428,162
WYOMING	$1,092,000	$495,778	$1,587,778	$941,300	$704,478
AMERICAN SAMOA	$201,000	$179,812	$380,812	$276,600	$162,212
GUAM	$205,000	$185,934	$390,934	$287,650	$161,284
N. MARIANAS	$201,000	$172,746	$373,746	$265,000	$166,746
VIRGIN ISLANDS	$204,000	$174,574	$378,574	$269,000	$167,574
TOTAL	$66,043,000	$87,754,992	$153,797,992	$153,163,983	$3,824,009

Table 4

NATIONAL ENDOWMENT FOR THE ARTS
GRANTS/APPLICATIONS BY STATE SUMMARY
FOR FISCAL YEAR 89

	APPLICATIONS RECEIVED		GRANTS AWARDED	
STATE	NUMBER	% OF TOTAL APPLS	NUMBER	% OF TOTAL GRANTS
Alaska	64	0.4	31	0.7
Alabama	89	0.5	20	0.4
Arkansas	58	0.3	6	0.1
American Samoa	8	0.0	2	0.0
Arizona	205	1.1	44	1.0
California	2,478	13.8	601	13.5
Northern Mariana Islands	4	0.0	2	0.0
Colorado	220	1.2	54	1.2
Connecticut	269	1.5	73	1.6
District of Columbia	346	1.9	132	3.0
Delaware	30	0.2	9	0.2
Florida	323	1.8	59	1.3
Americans Abroad	56	0.3	7	0.2
Georgia	251	1.4	81	1.8
Guam	6	0.0	3	0.1
Hawaii	90	0.5	26	0.6
Iowa	110	0.6	34	0.8

NATIONAL ENDOWMENT FOR THE ARTS
GRANTS/APPLICATIONS BY STATE SUMMARY
FOR FISCAL YEAR 89

	APPLICATIONS RECEIVED		GRANTS AWARDED	
STATE	NUMBER	% OF TOTAL APPLS	NUMBER	% OF TOTAL GRANTS
Idaho	44	0.2	11	0.2
Illinois	710	4.0	167	3.7
Indiana	147	0.8	35	0.8
Kansas	74	0.4	18	0.4
Kentucky	105	0.6	37	0.8
Louisiana	134	0.7	29	0.7
Massachusetts	1,026	5.7	222	5.0
Maryland	358	2.0	55	1.2
Maine	129	0.7	31	0.7
Michigan	317	1.8	66	1.5
Minnesota	330	1.8	133	3.0
Missouri	231	1.3	70	1.6
Mississippi	37	0.2	14	0.3
Montana	64	0.4	22	0.5
North Carolina	229	1.3	53	1.2
North Dakota	17	0.1	7	0.2
Nebraska	65	0.4	20	0.4
New Hampshire	78	0.4	27	0.6
New Jersey	455	2.5	68	1.5
New Mexico	346	1.9	71	1.6

NATIONAL ENDOWMENT FOR THE ARTS
GRANTS/APPLICATIONS BY STATE SUMMARY
FOR FISCAL YEAR 89

	APPLICATIONS RECEIVED		GRANTS AWARDED	
STATE	NUMBER	% OF TOTAL APPLS	NUMBER	% OF TOTAL GRANTS
Nevada	30	0.2	8	0.2
New York	4,975	27.8	1,239	27.8
Ohio	357	2.0	105	2.4
Oklahoma	67	0.4	19	0.4
Oregon	185	1.0	47	1.1
Pennsylvania	687	3.8	182	4.1
Puerto Rico	46	0.3	20	0.4
Rhode Island	111	0.6	13	0.3
South Carolina	84	0.5	32	0.7
South Dakota	31	0.2	8	0.2
Tennessee	109	0.6	25	0.6
Texas	584	3.3	160	3.6
Utah	85	0.5	29	0.7
Virginia	304	1.7	47	1.1
Virgin Islands	14	0.1	2	0.0
Vermont	123	0.7	30	0.7
Washington	345	1.9	71	1.6
Wisconsin	199	1.1	54	1.2
West Virginia	33	0.2	10	0.2
Wyoming	25	0.1	12	0.3
TOTAL FOR ALL STATES	17,897	100.0	4,453	100.0

Table 5

NATIONAL ENDOWMENT FOR THE ARTS
GRANTS/APPLICATIONS BY STATE SUMMARY
FOR FISCAL YEAR 89

STATE	GRANT AMOUNT	% OF GRANT DOLLARS	TOTAL POPULATION (1,000)	% OF TOTAL POPULATION
Alaska	877,900	0.6	526	0.2
Alabama	1,233,100	0.8	4,084	1.7
Arkansas	451,950	0.3	2,388	1.0
American Samoa	218,600	0.1		
Arizona	1,556,468	1.0	3,384	1.4
California	16,031,944	10.5	27,663	1.4
Northern Mariana Islands	207,000	0.1		
Colorado	1,255,394	0.8	3,296	1.4
Connecticut	2,979,035	1.9	3,212	1.3
District of Columbia	6,062,385	4.0	622	0.3
Delaware	538,700	0.4	644	0.3
Florida	1,855,300	1.2	12,024	4.9
Americans Abroad	72,200	0.0		
Georgia	2,875,170	1.9	6,222	2.6
Guam	229,650	0.1		
Hawaii	1,074,155	0.7	1,083	0.4
Iowa	1,018,500	0.7	2,835	1.2
Idaho	463,679	0.3	999	0.4
Illinois	4,829,675	3.2	11,583	4.8
Indiana	1,492,825	1.0	5,531	2.3
Kansas	899,350	0.6	2,476	1.0
Kentucky	2,054,150	1.3	3,727	1.5
Louisiana	1,073,555	0.7	4,461	1.8
Massachusetts	5,598,633	3.7	5,856	2.4
Maryland	3,256,450	2.1	4,534	1.9
Maine	820,100	0.5	1,187	0.5
Michigan	2,152,940	1.4	9,200	3.8
Minnesota	8,046,440	5.3	4,246	1.7

NATIONAL ENDOWMENT FOR THE ARTS
GRANTS/APPLICATIONS BY STATE SUMMARY
FOR FISCAL YEAR 89

STATE	GRANT AMOUNT	% OF GRANT DOLLARS	TOTAL POPULATION (1,000)	% OF TOTAL POPULATION
Missouri	2,432,120	1.6	5,103	2.1
Mississippi	556,380	0.4	2,624	1.1
Montana	741,849	0.5	809	0.3
North Carolina	1,602,712	1.0	6,412	2.6
North Dakota	484,590	0.3	672	0.3
Nebraska	1,058,170	0.7	1,595	0.7
New Hampshire	793,000	0.5	1,057	0.4
New Jersey	1,677,150	1.1	7,672	3.2
New Mexico	2,528,401	1.7	1,500	0.6
Nevada	569,800	0.4	1,007	0.4
New York	40,094,830	26.2	17,826	7.3
Ohio	3,504,478	2.3	10,784	4.4
Oklahoma	719,159	0.5	3,273	1.3
Oregon	1,511,790	1.0	2,724	1.1
Pennsylvania	6,074,240	4.0	11,937	4.9
Puerto Rico	590,300	0.4		
Rhode Island	796,200	0.5	986	0.4
South Carolina	1,976,340	1.3	3,423	1.4
South Dakota	474,190	0.3	709	0.3
Tennessee	1,037,640	0.7	4,855	2.0
Texas	4,660,264	3.0	16,785	6.9
Utah	1,931,240	1.3	1,680	0.7
Virginia	1,651,054	1.1	5,904	2.4
Virgin Islands	211,000	0.1		
Vermont	711,233	0.5	548	0.2
Washington	2,228,270	1.5	4,539	1.9
Wisconsin	1,932,935	1.3	4,807	2.0
West Virginia	542,400	0.4	1,898	0.8
Wyoming	883,300	0.6	490	0.2

ATTACHMENT B-1

ART WITH RELIGIOUS THEMES FUNDED BY THE NATIONAL ENDOWMENT FOR THE ARTS

A $125,000 grant to the Metropolitan Museum of Art to support an exhibition of painting from Renaissance Siena. The city of Siena has a special devotion for the Virgin Mary ever since 1260. At the entrance of the exhibition was a large fresco of the Madonna of Mercy with her cloak extended so as to protect the Siennese citizenry. The fresco was removed from its original location in the 17th century and was divided into three large pieces. This was the first time all three parts were reunited.

In FY 87, a grant of $125,000 to the Metropolitan Museum of Art for an exhibition of Spanish Baroque painter, Francisco de Zurbaran, the leading artist working for churches in southern Spain. An essential aspect of the exhibition was the reassembly of several artpieces and cycles of pictures that were designed to be seen as decorative ensembles.

A $100,000 grant to the Los Angeles County Museum of art for an exhibition of the 17th Century painter Guido Reni of Bologna. His renowned works include "St. John the Baptist," "The Coronation of the Virgin" and "The Apostles Peter and Paul."

A $75,000 Museum grant to the Pierpont Morgan Library for an exhibition of drawings by Raphael and his school, many of which were on religious themes.

A $75,000 grant to the Walters Art Gallery in Baltimore for the reinstallation of such works as Raphael's "Madonna of the Candelabra," Battista Tiepolo's "Madonna and Child," El Greco's "St. Francis Receiving the Stigma."

Grants to visual artists whose themes & subject matter are religious: Richard Beerhorst, Willie Birch, Alex Seowtewa, Eddie Dominquez, Steve Rogers (terra cotta church interiors), Carmen Garza, Felix Lopez, Reverend Howard Finster

In Music, of the 53 grants awarded to choruses in FY 88, much of the repertoire was of religious nature, including masses, passions, requiems, and other types of choral oratorios by Argento, Bach, Beethoven, Brahms, Mendelssohn, Verdi, etc. by choruses from Boston to Portland, Oregon.

The Cathedral Concert Series in Newark New Jersey performs repertoire suited for the acoustic & visual setting of a grand cathedral, including many works with religious themes. The Endowment grant also supports its apprenticeship program for young, inner-city musicians to play in the orchestra.

We have supported the Fisk Jubilee Singers which perform Gospel music in Nashville, Tennessee.

In FY 88, grants totalling $19,500 to the Nashville Gospel Ministries to support American Gospel Arts Day.

A grant of $10,000 to the American Gospel Arts Fund for the First American Black Sacred Music Convention.

A grant of $19,300 to support "The Sacred Arts of Queens" a component of the annual Queens (NY) arts festival.

Nearly $40,000 to the New Mexico Community Foundation's design study of adobe churches which has led to the preservation of many of these historical houses of worship.

A grant of $7000 to the Jewish Federation of the Greater East Bay in Oakland, California to support a festival celebrating the dance, music and culture of Yiddish-speaking people.

Through a $20,000 Arts Endowment grant, the first major U.S. touring exhibition of Mexican retablo paintings was realized by InterCultura, Inc. of Fort Worth. Small devotional paintings on tin depicting the Holy Family and the saints, retablos are an important category of Mexican religious folk art from the 19th century displaying accomplished stylistic qualities of color, line and technique.

A grant of $10,000 to Penn Community Services on St. Helena Island, South Carolina to support a tour of traditional sacred musicians to sites across the state.

$9,000 to the Franciscian Sisters of Little Falls, Minnesota to support multidisciplinary arts activities.

$12,500 to the Staten Island Jewish Arts Festival.

$3,900 for the Santero Exhibition -- art with Christian themes -- at the Taos Spring Arts Festival.

$6,500 to the YIVO Institute for Jewish Research for recordings by klezmer clarinetist, Dave Tarras.

$25,000 to St. Norbert's College in De Pere, Wisconsin for a summer arts workshop for developmentally disabled youth.

These projects were judged by the peer review panels of the National Endowment for the Arts to have artistic merit regardless of their religious content. Our panels are instructed to look for artistic excellence as the main reason for recommending grants. The mission of the Arts Endowment is to promote the finest achievements of the American spirit.

CHRISTIAN & RELIGIOUS ART FUNDED BY THE ENDOWMENT

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$25,000 to St. Norbert's College in De Pere, Wisconsin for a summer arts workshop for developmentally disabled youth.

The point is that these projects were judged by the panels to have artistic merit regardless of their religious content. The Endowment is not "anti-anything" but pro-art. Our panels are instructed to look for artistic excellence as the main reason for recommending grants. The mission of the Arts Endowment is to promote the finest achievements of the American spirit.

ATTACHMENT C-1

DANCE

Ballet/Aspen, Inc. $23,200
Aspen, CO

To support the presentation of at least eight dance companies or artists during the 1989 Aspen Summer Dance Festival, the 1989 Hard Acts to Follow series, and the 1989 Carlisle Project at Aspen program.

Gloriana Opera Company, Inc. $ 4,600
Mendocino, CA

To support the presentation of at least four American dance companies, such as Fua Dia Congo, Elisa Monte, Bebe Miller, and Ballet Met, during the 1989-90 Mendocino Dance Series.

Mountain Arts $ 4,600
Kingfield, ME

To support a residency of at least two weeks, including performances, rehearsals, and extensive community activities, for the Feld Ballet during the summer of 1989

Volcano Art Center $ 5,600
Volcano, HI

To support artists' fees, a commission, and related costs for a four-week creative residency of Tandy Beal and Company in Hawaii Volcanoes National Park and its environs.

DANCE TOTAL: $38,000

DESIGN ARTS

Zube, Ervin H. Tuscon, AZ	$ 7,500

To support preparation of a book combining selected writings about the aesthetic qualities of designed and natural landscapes with a presentation of the statutory and case law relating to them which has evolved over the past 70 years. This will be a refinement and focusing of previous work by the author combined with insight about contemporary planning needs. In addition, it will contain selected writings from fiction, history, essays, and professional reports illuminating the values implicit in our landscapes. This book will serve as a source book for use by planners, designers, lawyers, students, and interested lay persons.

Hoefer, Evelyn New York, NY	$20,000

To support photographic documentation of the disappearing American rural landscape. America's family farms are dwindling in number, taken over by production farming or the suburbs. The grantee will portray the beauty of the vanishing landscape--the pastures of New England, the wide fields and lakes of Wisconsin, the grain farms of Minnesota. She will photograph the architecture of farms and show buildings instinctively sited in beautiful and natural ways by farmers. Portraits of farm families will show the pride, tradition of hard work, and character of the American farmer while revealing the hardships some farmers have been experiencing in recent years.

The Conservation Foundation Washington, DC	$31,000

To amend a grant previously recommended by the Council at the 97th meeting to support "Successful Communities," a sub-grant technical-assistance program designed to help communities protect the natural and historic qualities that lend them distinctiveness and character. Additional funds will allow the Conservation Foundation to fund more of the many worthy applications received for this program. The process includes review by the Successful Communities staff, field checks of promising applicants by Conservation Foundation regional representatives and review and approval by the Successful Communities Advisory Committee which is a group of historic preservation experts with a broad range of experience.

Kokomo, City of Kokomo, IN	$19,200

To support the design phase of developing Wildcat Creek Reservoir Park, a 1,300-acre pristine wilderness area, into an area offering the community diversified educational and recreational opportunities. In 1987 the City of Kokomo acquired this area, which has timberland, marsh, and waterways largely undisturbed in the original settlement of the area. The design challenge is to provide community access to the beauty, history,and information contained in this land while at the same time maintaining the integrity of the area. Hiking, boating, fishing, educational experiences, and historical information can be made available, provided proper planning is done to preserve the character of the site. Wildcat Creek Reservoir Park offers Kokomo an opportunity to create, through proper design, a model of interaction between visitors and natural environment.

Nebraskans for Public Television, Inc. Lincoln, NE	$48,200

To support a television documentary on the preservation and restoration of historic farm buildings and the importance of the farmstead in the cultural heritage of rural life. The program will show how changes in agricultural technology resulted in changes in barn architecture. It will also show how older structures, which often fail to meet the needs of modern agriculture, can be adapted to new uses. It will be produced by the Cultural Affairs department of the Nebraska ETV Network for public television distribution.

Hedman, Richard D. $ 9,500
Occidental, CA

To support a study of the design problems typical of suburban development. Unlike urban design, no cohesive body of thought exists about suburban design. The study will address options for both existing and new suburban development. The emphasis will be on practical actions that can lead to more coherent, satisfying development. The funds will be used for graphic documentation of case studies, including plans, photographs, and aerial photographs. The final product will be submitted to the American Planning Association as an article and may become part of a larger book incorporating studies for the Graham Foundation, a private foundation dedicated to advancing research in contemporary architecture, design and the study of urban planning.

Kommers, Peter C. $13,000
Bozeman, MT

To support the design of a heritage center to house sacred objects and artifacts of the Northern Cheyenne Indians. Constructing such a facility will help the Indians recover artifacts that are now in scattered collections throughout the country and create a centralized collection. This project will also help the Northern Cheyenne people begin to regain a sense of their identity and rich past.

Westmacott, Richard N. $14,500
Athens, GA

To support a study on patterns and practices in traditional gardens of African-American families in the rural South. The study will analyze the functions of the garden for food production, for household chores, for leisure, and entertainment. The report will be submitted for publication as a book to reach scholars, researchers, and the growing audience interested in American landscape history and vernacular traditions.

Langdon, Philip A. $20,000
New Haven, CT

To travel and gather material for a book analyzing the failings of conventional suburbs and marshalling arguments as to why and how Americans should build suburbs that are active, efficient, and accessible. The book will discuss such topics as how streets can affect public life; how the design of open spaces can either stimulate or discourage public use; how new development can raise the quality of life by bringing varied uses closer together; and how rules and regulations either deaden the public realm or help to infuse it with vitality.

Simo, Melanie L. $19,700
San Francisco, CA

To support work on a book, New Landscapes, which will examine the work and thought of major American landscape architects in the 20th century. Tracing the developments in housing, garden design, and landscape architecture in rural, suburban, and urban areas, the applicant will focus on the post-World War II landscape and on the individuals who shaped it.

Southworth, Michael $20,000
Berkeley, CA

To support a project that educates the public about the ecology, culture, and history of landscapes. Post-industrial society is disconnected from the environment; new development, particularly in the suburbs, typically levels natural features and sanitizes the environment. The applicant will study examples of both natural and urban landscape interpretations in the West, Northwest, and Southwest. The project will result in a monograph on landscape interpretation with design guidelines, sketches, and photographs.

Landscape Architecture Foundation Washington, DC	$35,000

To support preparation of a book on post-World War II landscape design in the United States. The book will feature essays, photographs, and renderings of the most significant landscape designs of the last 40 years. It will cover public plazas, corporate landscapes, parks, private residences, and environmental art. These designs represent the first consistent break with classical ideals and European models and with the exception of a few monographs on Halprin, Kiley and others, is undocumented. The book will be a valuable reference source for design professionals and will help the general public understand how landscapes are designed and maintained.

Louisiana Technical University Ruston, LA	$ 9,500

To support a project aimed at demonstrating that quality designs addressing the needs and aspirations of the poor are realizable. The project will focus on the urban and rural poor in the American South. The first step will be to identify the range of problems and concerns involved in the design of appropriate shelter. Next, a group of designers will be asked to create solutions to these problems in a design charette. Through the use of the resources of the program in architecture at Louisiana Tech University, the solutions will be refined and prepared for implementation. Finally, the North Central Louisiana Habitat for Humanity will build a series of houses. The project will be carefully documented, and these materials will be submitted to national journals for publication.

Univ. of Minnesota, Sch. of Architecture Minneapolis, MN	$50,000

To support establishment of a regional version of the Mayors Institute on City Design, the program initiated by the National Endowment for the Arts to improve the design of American cities. This version aims to extend the exploration of urban design beyond the Minneapolis/St. Paul area to small cities, townships, and suburban communities in the Upper Midwest region. Funds will be used for planning sessions and for testing a format in workshop with seven or eight mayors. Funding will also cover investigation of strategies to provide technical assistance to the mayors after the workshops. Once in place, the regional mayors' workshops will be an urban design resource for the Midwest, affording public officials an inexpensive outlet for experimentation and education in the quest for a better American urban landscape.

New Mexico Community Foundation Santa Fe, NM	$48,900

To support the current phase of a project aimed at preserving the adobe churches of New Mexico. After three years of experience, the New Mexico Community Foundation believes that the best way to stop the deterioration of adobe churches is to empower communities to preserve their own churches. The organization intends to: 1) conduct community workshops in adobe preservation; 2) develop preservation plans for nine more churches; 3) extend the architectural survey of historic churches into mideastern New Mexico; 4) continue to inform the public about the crisis; 5) publish two more issues of the newsletter; and 6) expand the directory of free or donated resources available for church preservation, and match these to community needs.

North Carolina Arts Council Raleigh, NC	$50,000

To support the Community Design Program, which provides practical information on how design excellence can improve livability. This is an extension of the Pride in Place program conducted through a partnership of the North Carolina

Arts Council, South Carolina Arts Commission, and the Tennessee Arts Commission. The Community Designs Program will concentrate on small towns where there is a need for public officials and the general public to understand how planning and zoning officials affect the community and the quality of life.

Waterford Foundation Waterford, VA	$15,000

To support the preparation of design guidelines for the 1,420 acre National Historic Landmark District of Waterford, Virginia. Waterford, a village founded in 1733 by the Quakers, consists mostly of 18th- and 19th-century buildings surrounded by farmland. Development pressures on the area are intense. In September 1988 the nonprofit Waterford Foundation completed a study documenting historic structures in the village and surrounding area. It is now possible to draw up guidelines showing where, how many, and what kind of new structures might be possible without fatal damage to the Landmark. The guidelines will be developed with technical advice from the National Park Service and will be used by Loudon County and the Waterford Foundation in the development of the historic district.

Kansas Arts Commission Topeka, KS	$30,000

To support a design program which provides for a design arts administrator, a design arts consultant service, and a grants program to assist arts organizations and community agencies in Kansas with cultural facility planning. Up to 10 days of professional fee support for design consultant services will be provided to community organizations and six $5,000 grants for cultural facility planning studies will be awarded on the basis of an application process. The cultural facility planning component of the new program addresses a critical need within the state of Kansas for incorporatingdesign professionals into the overall cultural facility planning process.

Maine Arts Commission with the Univ. of Southern Maine Augusta, ME	$39,900

To support a project providing assistance to state agencies and land-use policy makers, who are responsible for helping small Maine towns to resolve design issues. Because the state's land use bureau is mandated to assess the "visual impact" of major new development and because no satisfactory guidelines for this type of assessment exist, visual assessment guidelines will be developed. In addition, three forums will convene state agency advisors, community representatives, and officials from the state's major two land regulation agencies to interact cooperatively on policies which will affect the design of small towns and rural areas.

Vermont Council on the Arts Montpelier, VT	$28,000

To support the first phase of a statewide design arts program aimed at building design awareness and supporting quality design initiatives. The goal of the first phase is to educate the general public, particularly local town officials, in the design aspects of planning and the integration of design objectives in the planning process. This program is timely, since Vermont's 246 rural communities are being challenged by the Growth Management Act of 1988 to plan their future built environment and to integrate their plans at the regional and state levels. Resources are being made available to towns and regions for planning. Funds will provide for half of the salary of the newly created design arts officer on the staff of the State Arts Council, production and dissemination of a publication, and consultant honoraria.

Cooperative Agreement Multiple sources	$150,000

To support demonstration projects that will explore new design principles behind American landscape meaning and forms. Such projects will fill the huge gap geographically and conceptually in American design education and in the way people look at their own community resources and identity. These projects will focus on urban growth, where solutions tend to be generic and without reference to local character, and on interaction among designers and citizens. This effort will help us establish examples of ways we can truly Discover America--through design. Products may include publications, curricula, exhibits, seminars, and demonstrations among others.

DESIGN ARTS TOTAL: $678,900

EXPANSION ARTS

Cresson Lake Playhouse $12,000
Ebensburg, PA

To support administrative and artistic costs for the 1989-90 season of plays reflecting rural Appalachian culture, as well as a guest artist program which offers training and provides exposure for local professional artists (also: a $12,000 grant for their 1988-89 season).

Little Miami Theater Works $ 5,000
West Liberty, OH

To support artistic costs for the professional rural touring company, as well as development of scripts by collecting, recording, and preserving stories from rural residents.

Perseverance Theatre, Incorporated $18,500
Douglas, AK

To support an intensive professional training program in the theater arts including workshops, seminars, and master classes, an annual playwriting contest, the development of new/experimental scripts, and the mounting of two productions that evolved from the experimental workshops.

The Road Company $17,000
Johnson City, TN

To support the 1989-90 home season which includes the premiere of a new company-developed work, "A Place with the Pigs" by Athol Fugard, and "The Miracle Play" by Nashville playwright Michael Fields.

EcoTheater, Inc. $ 8,000
Lewisburg, WV

To support the documentation and cataloguing of indigenous theatrical works based on the oral traditions of the regions which have been previously collected and utilized in the development of this theater's productions, as well as for the salary of a full-time administrator.

Guthrie Arts & Humanities Council $ 5,000
Guthrie, OK

To support audience development and administrative costs including the salary of a full-time director for this rural theater presenting organization.

Lime Kiln Arts, Inc. $ 5,000
Lexington, VA

To support a workshop and production costs for performances by the professional theatre ensemble which presents works reflective of its predominantly Southern mountain rural poor population.

Little Miami Theater Works West Liberty, OH	$ 5,000

To support artistic costs for the professional rural touring company which creates and presents original works through a collaborative process involving script development through collection, recording, and preservation of stories from rural residents (forward-funded).

Old Creamery Theatre Company, Inc. Garrison, IA	$13,000

To support the mounting of an original story production, "Theatre in Your Lap," which will tour schools in Iowa and the Midwest and, through a flexible format, will allow for student/actor exchange.

Oregon Senior Theatre Ensemble Portland, OR	$ 5,000

To support the Southern Oregon Tour of performances by the professional company comprised of adults aged 55-80, including seasoned veterans as well as late-in-life artists.

Vigilante Players, Inc. Bozeman, MT	$10,000

To support administrative costs and audience development for this professional touring theater company which serves geographically remote rural communities in Montana.

Appalshop, Inc. Whitesburg, KY	$50,000

To support development, promotion, and presentation of indigenous and traditional Appalachian culture through the Appalshop Center Program, as well as administrative costs associated with marketing and audience development for this rural arts organization.

Blackbelt Arts and Cultural Center Selma, AL	$ 5,000

To support in part the salaries of the director, secretary/bookkeeper, and musical/drama director of this rural arts producing and presenting organization.

Coloured Performing Arts Institute, Inc. Meridian, MS	$ 5,000

To support the salary of the administrative director whose responsibilities include strategic planning and marketing management for this arts presenting organization which provides programming for culturally isolated rural communities.

Golden Triangle African American Cultural Society Starkville, MS	$ 5,000

To support the documentation and presentation of art forms indigenous to rural northern Mississippi, including, but not limited to, the visual arts and music.

Rose Center and Council for the Arts, Inc. Morristown, TN	$ 5,000

To support technical assistance workshops for rural artists and arts presenting organizations; a quarterly arts calendar/newsletter, monthly East Tennessee country music performances, and an artist-in-school program.

Society of Folk Arts and Culture, Inc. $ 5,000
Eutaw, AL

To support the salaries of an outreach coordinator and a clerical assistant, and for other administrative expenses associated with the implementation of programs which preserve and document the rural cultural traditions of West Alabama.

St. Francis Music Center $ 8,500
Little Falls, MN

To support advanced training programs in the visual arts; string, wind, and keyboard instruments; voice, orchestra, dance, music theory, and jazz improvisation. These programs have provided quality instruction to gifted students in rural central Minnesota since 1979.

Waianae Coast Culture and Arts Society, Inc. $25,000
Waianae, HI

To support on-going professional workshops in traditional dance, music, and crafts that perpetuate the many ethnic cultures in the Hawaiian Islands, as well as the presentation of diverse art forms.

Central Pennsylvania Village Crafts, Inc. $12,500
Bellefonte, PA

To support a resident artists program for traditional crafts and a master program for advanced training in the art of quilt-making and tatting. The artists-in-residence program will offer traditional crafts training to over 150 rural craftspeople in a seven-county area.

Custer County Art and Heritage Center $ 5,000
Miles City, MT

To support an exhibition and instruction program specifically for a rural audience. The Art Center serves the immediate rural community of Miles City including six small townships steeped in the traditions of ranching and farming.

Margaret Harwell Art Museum $ 5,000
Poplar Bluff, MO

To support partial administrative costs for an exhibition program serving an isolated rural population in Southeast Missouri. The Museum is the only art center within a 90-mile radius of Poplar Bluff, and the only art museum within 150 miles of town.

Municipality of Arecibo/Art Workshop $ 5,000
Arecibo, PR

To support a training and exhibition program serving rural artists of the Arecibo region. The services of this organization are expected to reach approximately 300 artists during the current fiscal year.

Southern Alleghenies Museum of Art $15,000
Loretto, PA

To support the exhibition activities or the Museum's two major extension facilities in Johnstown and Blair serving the artistic needs of these rural communities and their artists.

East Tennessee Community Design Center, Inc. $ 5,000
Knoxville, TN

To support the design assistance program which makes design services available to community groups in rural Tennessee. Since 1969, projects have ranged from designs for reuse of an abandoned school building to site plans and housing designs for a community land trust.

Compania Folklorica Puertorriquena, Inc. $ 8,000
San Juan, PR

To support a training program in folkloric dance and performances for rural communities throughout Puerto Rico, as well as administrative costs. In the past year this company has performed in New York City, Washington, D.C., Baltimore, San Francisco, Spain, and Caracas, Venezuela.

Montana Ballet Company, Inc. $ 5,000
Bozeman, MT

To support a touring performance of "Montana Myths," which will use local Native American dancers. This performance will be toured throughout Montana, including Indian reservations.

Carter Family Memorial Music Center, Inc. $11,000
Hiltons, VA

To support a concert and performance program to preserve and promote blue grass, traditional old-time string bands, and other musical styles from the Appalacian region.

Alternate Roots, Inc. $15,400
Atlanta, GA

To support artistic and administrative skills workshops for rural and urban Appalachian arts organizations; artistic exchanges with residencies providing workshops at mini-festivals; an on-going artistic and administrative technical assistance workshop; and publication of the newsletter.

Ink People/Rural Arts Services $ 5,000
Eureka, CA

To support the production of ARC: The Rural Arts Newsletter, a bi-monthly publication which provides economic, community, and career development information for artists and arts organizations located in rural northern California (also: a $5,000 grant to support partial salary costs of technical assistance to ten rural California communities to develop improved sales and exhibition opportunities for local visual artists and craftspeople).

Maine Arts Sponsors Association $ 6,200
Augusta, ME

To support a technical assistance program which provides workshops in leadership, time management, proposal writing, and marketing for artists and arts organizations in isolated rural regions of the state.

Montana Institute of the Arts Foundation $17,500
Billings, MT

To support part of the salaries to provide technical and administrative services for emerging arts organizations, including the publication of "Montana Artpaper," a bi-monthly newsletter and cultural calendar (also: $17,500 forward-funded).

EXPANSION ARTS TOTAL: $362,100

FOLK ARTS

University of Arizona $16,100
Tucson, AZ

Support for two videotape documentaries: one on Paiute (Native American) traditional oral literature (specifically the telling of myths and origin tales), and another on traditional Paiute handgames, including the necessary accompanying musical performances (primarily chanting and the improvisation of topical verses).

David Adler Cultural Center $ 6,700
Libertyville, IL

Support for a series of concerts entitled "In the Tradition" to be held at the David Adler Cultural Center and featuring senior traditional musicians form Illinois and surrounding states, such as Irish musicians Joe Shannon and Johnny McGreevey, Missouri fiddler Taylor McBain, blues musician David "Honeyboy" Edwards, and Indiana singer Lotus Dickey.

North Dakota Council on the Arts $23,400
Fargo, ND

Support for a Dakota Centennial (1889-1989) folk festival to be held at two sites: Sioux Falls, SD and Bismarck, ND. Fieldwork is currently underway in both states in order to develop a joint program that can be presented in both locations. The current grant is to provide the necessary technical assistance for producing and presenting such an unusual plan in an area where few such efforts have been made before.

Texas A&I University $32,400
Kingsville, TX

Support for the necessary fieldwork and the final preparation costs of an exhibit of south Texas Mexican-American traditional crafts, to open at the John E. Conner Museum at Texas A&I University and tour to other sites in Texas.

West Alabama Community College $28,000
Eutaw, AL

Support for a festival of local traditional Afro-American arts and artists from western Alabama. This project will include preparation of promotional leaflets and printed programs featuring local artists, and the bringing in of outside technical assistance in the areas of materials, design, festival layout, and program production.

Appalshop, Inc. $19,400
Whitesburg, KY

Support for a thirteen part radio series on women in old-time music. The series will combine interviews, archival materials, commercial and field recordings and narration concerning the lives and careers of such artists as Heritage award winners Ola Belle Reed and Lily May Ledford, as well as Helen and Jeanette Carter, Jean Ritchie, and Etta Baker, among others.

Appalshop, Inc. $11,500
Whitesburg, KY

Support for the third annual "Seedtime on the Cumberland," a three day event celebrating Appalshop's 20th anniversary and paying tribute to the old-time country musicians, singers, and storytellers who have worked with Appalshop since 1969.

Bethel German Communal Colony, Inc. $14,100
Bethel, MO

Support for a camp, convention, and conference on traditional fiddling of the Midwest.

Buffalo Bill Memorial Association $ 6,400
Cody, WY

Support for a three-day event designed to encourage the performance and preservation of cowboy songs and range ballads. Participants will include working cowboy poets, as well as local musicians and scholars in the field.

Coconino Center for the Arts $12,400
Flagstaff, AZ

Support for folk arts presentations by traditional American Indian and cowboy crafts workers during the "Festival of Native American Arts" and the "Trappings of the American West" exhibitions.

Colorado Council on the Arts & Humanities $30,000
Denver, CO

Support for a Colorado state folk arts program. Federal, state, county, and municipal funds will be pooled in support of two regional folk arts coordinator positions, one in Grand Junction and a second in Arvada.

Cupa Cultural Center $ 4,000
Pala, CA

Support for the annual Cupa Day Festival in Pala, California, featuring southern California's American Indian arts including demonstrations of traditional basketweaving, soapstone carving, beadwork, and pottery, as well as performances of the blackbird, fox, and crane dances.

Cuyahoga Valley Association $ 6,000
Peninsula, OH

Support for the 1989 Cuyahoga Valley Festival, northeastern Ohio's largest and most visible event featuring local and national traditional artists.

Delta Blues Museum $ 3,700
Clarksdale, MS

Support for a record album by living Mississippi Delta blues artists resident in or near Coahoma County, Mississippi.

Eight Northern Indian Pueblos Council $16,300
San Juan Pueblo, NM

Support to develop: 1) crafts demonstrations for the Eight Northern Indian Pueblos Arts and Crafts Fair; 2) educational materials on the artists and art forms present at the Fair; and 3) a long-range plan to involve Pueblo youth in the learning and production of Pueblo crafts.

Finney County Historical Society $ 7,200
Garden City, KS

Support for the presentation of local traditional artists at a two-day festival in southwestern Kansas.

Humboldt State University Foundation $ 5,700
Arcata, CA

Support for classes and workshops featuring northwest California Native American basketry of the Hoopa tribe.

Institute of the NorthAmerican West Ft. Steilacoom, WA	$ 6,500

Support for fieldwork costs for the upcoming "Celebration of Puget Sound," a mobile exhibit and performance event featuring the traditional arts of the Puget Sound area.

International House of Philadelphia Philadelphia, PA	$ 9,800

Support for a travelling exhibition on traditional craftsmanship in the Delaware Valley of Pennsylvania.

Jacob's Pillow Dance Festival Lee, MA	$10,000

Support for a week of performances and workshops at Jacob's Pillow by an ensemble of traditional Hawaiian dancers.

John C. Campbell Folk School Brasstown, NC	$25,300

Support for the folk arts position and program at the John C. Campbell Folk School.

Macon Youth Museum, Inc. Macon, GA	$ 9,100

Support for an exhibit, including an especially produced video, "Pottery of the Folk Tradition," presenting the folk pottery of Georgia. Due to its location on the Fall Line running across central Georgia, the Museum of Arts and Sciences, of which the Macon Youth Museum is a part, is planning a year-long comprehensive interdisciplinary set of exhibits and ancillary activities on the art, science, history, and economy of clay. The folk exhibit will contrast the use of clay by Georgia folk potters drawing on earlier traditions with that of studio craftsmen and industrial artisans/designers.

McCormick Arts Council at the Keturah McCormick, SC	$18,300

Support for the presentation of local traditional artists at the Savannah Heritage Festival.

Mississippi Arts Commission Jackson, MS	$27,400

Support for a state folk arts program including the services of a professional folk arts coordinator in Mississippi.

North Carolina Folklife Institute Durham, NC	$16,100

Support for the participation of traditional musicians and singers in a conference celebrating the creation of a Southern Folklore Archive at the University of North Carolina. The conference will feature one major concert as well as the presentation of exemplary documentary projects and a three day lecture and discussions series examining the interaction of musicians, folklorists, recordists and filmmakers in the revival of old-time string music in North Carolina and around the South.

North Carolina Maritime Museum Beaufort, NC	$23,300

Support for the North Carolina coastal folklife project including a series of exhibits and programs developed by a professional folk arts coordinator.

North Columbia Schoolhouse Cultural Center $ 8,500
Nevada City, CA

Support for a section of the Second Foothill Regional Arts Festival to be devoted to a presentation of the arts traditional to the Miwok Indians of northern California.

Northwestern State University of LA $17,200
Natchitoches, LA

Support for an illustrated exhibit catalogue on the Claude Medford collection of southern and eastern American Indian material culture. Artifacts from this collection will be made available on a loan basis to tribal craftsmen and educational groups; the catalogue will be designed as a resource guide to this extensive collection.

Rapid City Fine Arts Council $ 6,100
Rapid City, SD

Support for a presentation of cowboy poetry, music, and traditional ranching crafts as part of the Black Hills Heritage Festival.

Recursos de Santa Fe $18,200
Santa Fe, NM

Support to document the many important Hispanic folk art artifacts found in rural churches and moradas throughout northern New Mexico.

Rensselaer County Council for the Arts $ 8,600
Troy, NY

Support for performances and workshops in conjunction with an exhibition of the folk arts of rensselaer County. Participants will be drawn from the Irish, French Canadian, Anglo-American, Afro-American, Ukranian, and Armenian communities.

School of American Research $23,000
Santa Fe, NM

Support for a program of travel and subsistence subsidies for southwest Native American traditional artisans and artists to study the extensive collection of American Indian art at the School.

South Dakota Arts Council $25,000
Sioux Falls, SD

Support for two festivals of the arts traditional to the northern plains to celebrate the Centennials of North and South Dakota.

State Arts Council of Oklahoma $18,200
Oklahoma City, OK

Support for the state folk arts coordinator position in Oklahoma.

Taos Spring Arts Celebration Assn. $ 3,000
Taos, NM

Support for a week-long exhibit and live presentations of traditional Hispanic New Mexican furniture making.

University of South Carolina $ 8,600
Columbia, SC

Support for a traditional music concert series and scholarly lectures dealing with the development of country music in the United States, to be held in conjunction with an exhibition of Thomas Hart Benton's paintings that convey his interest in and knowledge of traditional American folk music.

Wheelwright Museum of the American Indian $31,200
Santa Fe, NM

Support for two 16mm films (28 minutes each) documenting the culture, beliefs, and traditional pottery making of the San Ildefonso Tewa Pueblo people of New Mexico, as personified in the life of their world-famous potter, the late Maria Martinez and her lineage.

Wisconsin Folk Museum $ 9,100
Mount Horeb, WI

Support for demonstrations and a catalogue related to the exhibition "Upper Midwest Rosemaling: A Story of Revival and Regionalism." "Rosemaling" or rose painting is a Norwegian traditional decorative craft practiced extensively through the upper midwestern states since the 1930s.

Alabama State Council on the Arts $30,000
Montgomery, AL

Support for the statewide folk arts apprenticeship program in Alabama.

Bureau of Florida Folklife Programs $26,200
White Springs, FL

Support for a statewide folk arts apprenticeship program in Florida.

Iowa Arts Council $18,800
Des Moines, IA

Support for a statewide folk arts apprenticeship program in Iowa.

Kansas Arts Commission $20,000
Topeka, KS

Support for a statewide folk arts apprenticeship program in Kansas.

Louisiana Folklife Program $30,000
Baton Rouge, LA

Support for a statewide folk arts apprenticeship program in LA.

Missouri Arts Council $30,000
St. Louis, MO

Support for a statewide folk arts apprenticeship program in Missouri.

Nevada State Council on the Arts $20,000
Reno, NV

Support for a statewide folk arts apprenticeship program in Nevada.

North Dakota Council on the Arts $22,600
Fargo, ND

Support for a statewide folk arts apprenticeship program in ND.

Amana Artists' Guild $ 7,000
Amana, IA

To support the Amana Cultural Heritage Project, including fieldwork, classes, and public presentations that feature the work of senior community artists and artisans.

Appalshop, Inc. $11,000
Whitesburg, KY

To support a videotape about Morgan Sexton, banjo player, singer, storyteller, and long time resident of Letcher County, KY.

Buffalo Bill Memorial Association $13,700
Cody, WY

To support a workshop on Plains Indian woodcarving and a series of demonstrations by Indian traditional artists at the Buffalo Bill Historical Center.

Cedarburg Cultural Center $27,900
Cedarburg, WI

To support a traveling exhibition of folk musical instruments, including Hardanger fiddles, Ojibwa dance drums, Greek bouzoukis, and German concertinas, all created by Wisconsin traditional craftsmen. A series of concerts featuring the instruments will take place in various sites around the state where the exhibit will be mounted.

Center for the American Indian $ 3,000
Oklahoma City, OK

To support an amendment to Grant #88-5533-0152 to include costs associated with printing a catalogue of photographs of Oklahoma Native American musical instruments to accompany a booklet and cassette prepared from the exhibit, "Songs of Indian Territory: Native American Musical Traditions of Oklahoma."

Coconino Center for the Arts $ 3,900
Flagstaff, AZ

To support a two-day festival, "Northern Arizona Mexican Folk Traditions," at the Coconino Center for the Arts.

Friends of Pyramid Lake $14,400
Reno, NV

To support a half-hour film portraying the life of Katie Frazier, a 97-year old Paiute storyteller and craftswoman living on the Pyramid Lake Reservation.

Groton Center for the Arts $12,000
Groton, MA

To support the Folklife-in-Education program at the Groton Center for the Arts, including residencies, a teacher institute, and a series of public events, including a portion of the annual Septemberfest honoring the traditions and tradition bearers of the Nashoba Valley.

Humboldt Arts Council $ 7,800
Eureka, CA

To support a series of workshops in the making of traditional Northern California Indian ceremonial regalia for the Brush, Jump, and White Deerskin dances of the Yurok, Karuk, and Hupa tribes.

Idaho Commission on the Arts $10,000
Boise, ID

To support a survey of and a cultural plan for the traditional arts and artists of the Hispanic population in the eastern Idaho-western Oregon border region.

La Compania de Teatro de Albuquerque $ 4,500
Albuquerque, NM

To support a long-play album by Los Reyes de Albuquerque of the traditional dance music of northern New Mexico and southern Colorado

$11,700

To support a 16mm film on the music and life of northern New Mexico *corrido* composer and singer Juan Roybal.

$ 4,700

To support a series of presentations of traditional northern New Mexico Hispanic music at senior citizen centers throughout New Mexico.

Lee County Arts Council $ 5,500
Bishopville, SC

To support a cultural assessment of Lee County, S.C., which will identify local traditional artists for future presentations and document their arts forms for local archives.

Lower Adirondack Regional Arts Council $ 7,500
Glens Falls, NY

To support a series of four concerts highlighting ethnic traditions of the Lower Adirondack region featuring French Canadian/Franco-American, Irish/Irish-American, Italian/Italian-American, and Scots/Scots-American musicians.

Minto Village Council $36,200
Minto, AK

To support a 16mm film documenting the verbal, craft, song, ceremonial, and other traditions surrounding the *huteetl*, an Athabaskan memorial potlatch. This film plan was drawn up in response to a unanimous request from the Minto Village tribal elders.

Pennsylvania Heritage Affairs Commission $14,800
Harrisburg, PA

To support a series of programs (crafts demonstrations and folk musical performances) to accompany the traveling exhibition "Crafts and Community: Traditional Arts in Contemporary Society."

Pennsylvania Heritage Affairs Commission $36,400
Harrisburg, PA

To support a regional folk life specialist position.

Pueblo of Zuni Arts & Crafts $27,500
Zuni, NM

To support a travelling exhibit of Zuni carved fetishes, organized by the Pueblo of Zuni and the Maxwell Museum of Anthropology, Albuquerque, New Mexico.

Salt, Inc. $ 9,500
Kennebunkport, ME

To support two photographic exhibitions documenting the traditional craftspeople of Maine. One free-standing exhibit will be available to county fairs and regional festivals, the other wall-mounted exhibit to local schools and libraries.

Schoharie Museum of the Iroquois Indian $ 9,100
Schoharie, NY

To support the annual Iroquois Indian Festival at Cobleskill, NY. Longhouse social dancing will be demonstrated, along with black ash splint basket-making, antler carving, pottery making, and other art forms traditional to the Iroquois.

Sealaska Heritage Foundation $30,000
Juneau, AK

To support "Celebration '90," a biennial event that brings together singers and dancers of the Tlingit, Haida, and Tsimshian tribes of southeast Alaska.

Southern Arts Federation $31,500
Atlanta, GA

To support the development of a southern regional folk arts program for the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee.

State Historical Preservation Center $ 7,800
Vermillion, SD

To support an amendment to Grant #88-5533-0144 providing a three-month extension of the state folk arts coordinator position in SD.

Tennessee Folklore Society $15,000
Murfreesboro, TN

To support the second Tennessee Banjo Institute, a three-day program of workshops, lectures, performances, and exhibitions demonstrating the history and development of the banjo, including additional gatherings of serious banjo students with master musicians and scholars representing traditional, bluegrass, classic, and minstrel styles.

University of New Hampshire $19,800
Durham, NH

To support "New Hampshire Folk Artists: The Living Tradition," a series of three-day residencies by traditional craftspeople and a program of regional folk music together with a set of interpretive lectures by visiting folk arts scholars. The program is intended to serve a large regional audience including school children, the general public, and members of the artists' own communities.

University of Wyoming $12,100
Laramie, WY

To support fieldwork in WY to locate traditional artists in preparation for a 1990 state-wide folklife festival.

$10,000

To support the state folk arts coordinator position for a period of five months.

Volcano Art Center $20,000
Volcano, HI

To support four concerts of traditional hula and four concerts of traditional Hawaiian folk music.

Wisconsin Folk Museum $26,000
Mount Horeb, WI

To support a folk arts specialist position at the Wisconsin Folk Museum. The position will include regional field-work and research, as well as the preparation of traditional arts presentations through museum exhibits, broadcast media, and performances, such as concerts and festivals.

Davis & Elkins College $26,200
Elkins, WV

To support a state folk arts apprenticeship program in West Virginia.

Guam Council on the Arts & Humanities $10,000
Agana, Guam

To support a state folk arts apprenticeship program in Guam.

Minnesota State Arts Board $20,000
St. Paul, MN

To support a state folk arts apprenticeship program in Minnesota.

Shoshone Tribal Business Council $20,000
Fort Washakie, WY

To support a traditional folk arts apprenticeship program for the Shoshone tribe.

University of South Carolina $11,700
Columbia, SC

To support a state folk arts apprenticeship program in SC.

Utah Arts Council $28,000
Salt Lake City, UT

To support a state folk arts apprenticeship program in Utah.

Wisconsin Arts Board $10,000
Madison, WI

To support a state folk arts apprenticeship program in WI.

American Samoa Council on Arts, Culture and the Humanities $31,400
Pago Pago, American Samoa

To support the position of folk arts coordinator for American Samoa.

Berea College $31,700
Berea, KY

To support the state folk arts coordinator position for Kentucky.

Guam Council on the Arts & Humanities $29,300
Agana, Guam

To support the Guam state folk arts coordinator position.

FOLK ARTS TOTAL: $1,432,000

INTER-ARTS

Appalshop, Inc. $14,000
Whitesburg, KY

To support audience development, promotional, and administrative expenses during the 1989/90 season for this interdisciplinary presenter located in the heart of the Appalachian mountains.

Catamount Film and Arts Company $13,000
St. Johnsbury, VT

To support a program in 1989/90 at Catamount that will support artists' fees and will improve and expand staff and audience development efforts.

Davis & Elkins College $ 9,000
Elkins, WV

To support artists' fees and transportation and administrative expenses for a five-week festival of public performances and workshops featuring over eighty performers and groups.

Helena Film Society, Inc. $27,500
Helena, MT

To support artists' fees, staff salaries, and other related expenses to expand programming and to develop multiple performances during the 1989/90 season.

Humboldt State University Foundation $28,000
Arcata, CA

To support artists' fees associated with increased residencies by artists during the 1989/90 season at Humboldt State.

LPL Plus APL $ 5,000
Lewiston, ME

To support artists' fees and administrative and production expenses associated with the 1989/90 presentation season.

Lime Kiln Arts, Inc. $ 5,000
Lexington, VA

To support the 1989/90 season at Lime Kiln Arts whose focus is art that reflects the history and culture of the region.

Pentangle $ 5,000
Woodstock, VT

To support the 1989/90 season at Pentangle, a presenter serving a rural area of New England.

Virginia Commission for the Arts $13,000
Richmond, VA

For artists' fee support to presenters of out-of-state dance companies during the 1989/90 season. Priority will be given to block-booked tours, to presenters in rural areas, and to minority companies.

ATLATL $15,000
Phoenix, AZ

To support ATLATL's third Native Arts Network conference to be held in April of 1990 in Washington, D.C. The conference will host Native American artists and arts administrators from around the country and a conference report will be published and distributed nationally.

Alternate Roots, Inc. $19,000
To support a series of five regional workshops and up to 20 Artistic Assistance Residencies sponsored by Roots to assist the artistic development of southeastern performing artists who are creating original, indigenous work. The workshops are structured around performances/readings of works-in-progress followed by peer critique and directorial or choreographic assistance.

Chicano Humanities and Arts Council, Inc. $ 8,000
Denver, CO

To support six workshops focusing on marketing for artists and regional arts organizations and to support the continuation and expansion of the Council's series of artists' meetings to exchange ideas and information. The goals of CHAC are to develop support for Chicano/Latino arts in the region.

National Council for the Traditional Arts $20,000
Washington, DC

To support the expansion of NCTA's touring and referral services in order to assist artists in securing additional presenting opportunities and increased fees.

Puerto Rico Community Foundation $10,000
Hato Rey, PR

To support a grants program for artists in Puerto Rico. The Foundation offers a wide variety of services for artists throughout Puerto Rico.

INTER-ARTS TOTAL: $191,500

LITERATURE

The Washington State Arts Commission $10,000
Olympia, WA

To support a collaborative reading exchange between Washington and Oregon. Twenty writers will present ten readings in the underserved eastern rural areas of the two States. Local arts agencies will compete for selection as a site based on rural status, interest, and ability to provide travel and lodging expenses for writers. A production team will book, manage, and develop promotional materials which will identify the readings as part of this cooperative venture.

Note: A large number of grants categories within the Literature Program are National in scope. There is bound to be a great deal of rural activity within this framework. Speak with the Literature Program for clarification.

LITERATURE TOTAL: $10,000

MEDIA ARTS

Helen DeMichiel $10,000
Minneapolis, MN

For the production of a video essay on the loss of farmlands in the Twin Cities area to encroaching suburbs.

Appalshop, Inc. $52,000
Whitesburg, KY

To support a center offering film/video workshops; distribution; performances; artist residencies; film/video screenings; radio and television productions and programming; and archival activities. In 1989, Appalshop also will create a permanent fund for new productions, a regional training program for high school students and their teachers in documentary radio and video production, and a curriculum development project for Appalachian schools.

Regents of the Univ. of Colorado/Rocky Mt. Film Ctr. Boulder, CO	$28,000

To support a center offering residencies; an international film series; Avant-Garde Film/Video series; facilities access; film information/study services; and programming services to remote communities in the region.

South Carolina Arts Commission Columbia, SC	$43,000

To support a center offering access to film/video/audio production/post-production facilities; workshops; circulating programs; distribution; a media artist-in-education project; publications; exhibition information services; and an independent media archive.

Utah Media Arts Center, Inc. Salt Lake City, UT	$10,000

To support film/video exhibitions; access to video facilities; visiting artist programs; workshops in video; circulating programs; festivals; and broadcast of locally-produced works on community access television.

Schultz, Chiz New York, NY	$25,000

To support the pre-production phase of a film about arts initiatives that have taken place in small towns across the country.

Note: A large number of Media grants were National in their impact. Check with Program for clarification regarding rural/national relationship.

MEDIA ARTS TOTAL: $168,000

MUSEUM

Alexandria Museum of Art Alexandria, LA	$ 8,300

To support a series of site-specific installations by emerging and established regional artists. Each artist will create works for an outdoor space with high visibility for pedestrian and auto traffic. Patrick Dougherty, Joni Mabe, Greely Myatt, Grover Mouton, and Tom Ladouza will participate in the project.

Boise Art Museum Boise, ID	$10,000

To support an exhibition of works specifically created for the yard environment. The focus will be on self-taught as well as professionally trained artists who choose to create objects for the yard. The exhibition will provide the opportunity to reassess this genre which has also been described as naive, outsider, and visionary. (catalogue)

Boise Art Museum Boise, ID	$20,000

To support the showing in Boise and at the Cheney Cowles Museum in Spokane, Washington, of Red Grooms' "Ruckus Rodeo," an exhibition organized by the Modern Art Museum of Fort Worth, Texas.

Museum of Arts and Sciences $20,000
Macon, GA

To support the presentation in Macon of "Abstract Sculpture in America: Four Decades of Modernism, 1930-1970." an exhibition organized by the American Federation of Arts, New York.

Oregon Arts Commission $10,000
Salem, OR

To support the organization and touring of small visual arts exhibitions produced by Visual Arts Resources, the traveling exhibition department of the Oregon Museum of Art. The exhibitions are made available at minimal cost to small communities throughout the Northwest. (tour)

Yellowstone Art Center $15,000
Billings, MT

To support an exhibition of the graphic work of contemporary American artist Richard Diebenkorn. The exhibition of approximately 40 etchings, woodcuts, and lithographs will focus on the large-scale prints produced since 1980. These include the Crown Point Residencies series done in San Francisco, the wood block prints done in Japan, and the lithographs made with Gemini in Los Angeles. (catalogue/tour)

Buffalo Bill Memorial Association $ 3,000
Cody, WY

To support a conservation survey of the extensive sculpture collection in the Buffalo Bill Memorial Museum. Over 250 pieces of sculpture of the American West, mainly in bronze, will be considered in the survey including important castings by Frederic Remington and works by Charles M. Russell, Cyrus Dallin, Sally Farnham, and A.P. Proctor. Four pieces of monumental outdoor sculpture by Gertrude Vanderbilt Whitney, James E. Fraser, Harry Jackson, and Richard Greeves are also included in the survey.

Bennett College $ 4,500
Greensboro, NC

To support conservation treatment of a 1931 oil mural by Aaron Douglas at Bennett College. Best known for allegorical murals and canvases painted about the life and cultural background of Afro-Americans, Aaron Douglas was the forerunner of the Harlem Renaissance. The mural, entitled "Harriet Tubman," will be conserved by the North Carolina Museum of Art's Outside Conservation Services Program.

Buffalo Bill Memorial Association $ 5,500
Cody, WY

To support conservation treatment of Edgard S. Paxson's painting "Custer's Last Stand" and a group of models by Charles M. Russell at the Buffalo Bill Memorial Association. The painting and the models are among the more important works in the Association's collection of art of the American West. "Cluster's Last Stand" is a key visual document in understanding the significance of an event which has assumed mythic proportions; the waxes, some of which were cast in bronze, reveal the originality of Russell's artistic intentions.

Hickory Museum of Art $ 8,000
Hickory, NC

To support conservation treatment of a group of oil paintings in the Hickory Museum of Art. The works to be conserved, drawn from the collection of 19th- and 20th century American art that forms the strength of the Museum, include the following: Thomas Cole's "American Landscape," T. Worthington Whittredge's "A Trout Stream," Louis Loeb's "Sea Breeze," and William Smedley's "The Artists's Mother."

Huntington Museum of Art Huntington, WV	$12,000

To support conservation treatment of selected 19th century European paintings in the Huntington Musuem of Art. Figural salon paintings by Julien Dupre and Jules Breton; landscapes by followers of the Barbizon tradition, such as Pierre-Etienne-Theordor Rousseau; animal paintings by Constant Troyon and Charles Emile Jacque; and history paintings by Jean-Louis-Ernest Meissonier reflect the diversity and quality of the Huntington's collection.

Danville Museum of Fine Arts and History Danville, VA	$17,000

To support an exhibition of the Museum's American costume collecting dating from the Post Civil War period to 1930. The collection will include the Museums's recently acquired Woodhull Collection of American Costumes (1860-1930) which has never been on view. Because of the fragile nature of the costumes, the exhibition will be temporary and will be supplemented by period photographs of the costumes being worn by their original owners. The project is particularly appropriate in Danville, VA, where a large percentage of the community is involved in the textile industry.

Danville Museum of Fine Arts and History Danville, VA	$2,500

To support a general survey of environmental and storage conditions in the Danville Museum so that adequate temperature and humidity controls can be installed. The Museum's collection focuses on 18th- and 19th-century decorative arts that include furniture, textiles, and costumes. The Museum's rich collection of reflects the city's history as a mill town and the community's interests in textile manufacturing. In addition, the Musuem has a rapidly growing collection of works on paper by American artists since 1930.

Utah State University/ Nora Eccles Harrison Museum of Art Logan, UT	$ 5,000

To support the purchase of storage units for the permanent collection storage areas of the Nora Eccles Harrison Museum of Art. The additional storage capacity will allow the Museum to store objects on loan separately from the permanent collection and thereby reduce access and security risks to the permanent collection. The Museum's collection comprises important 20th-century American ceramics, paintings, sculpture, and works on paper, as well as 18th- and 19th-century Japanese ceramics and African, Pacific, and American tribal arts.

Flint Institute of Arts Flint, MI	$ 3,000

To support the development of an educational outreach program intended primarily for local schools. The program will include pre-visit slide presentations, visits to the Museum, and follow-up activities, and will focus on the Institute's permanent collection. The project is targeted to fourth and fifth graders and is part of a plan for the Flint Institute of Arts to become an important educational resource to the area.

International Folk Art Foundation Santa, Fe, NM	$18,000

To support educational programming to complement the inaugural exhibition of the Museum's new Hispanic Heritage Wing. The programming includes community outreach and docent training aimed at bilingual speakers and high school students. Twelve communities have been targeted for outreach due to the artistic significance of their historic church architecture (18th and 19th centuries) and religious folk art. Curatorial presentations will be made following religious services and will include a slide presentation of New

Hispanic Heritage Wing and the Musuem's Hispanic collections. A museum-sponsored trip to view the exhibition "Familia y Fe (Family an Faith)" will conclude each outreach program, with tours led by the new bilingual docents. High school students will be selected for scholarships to train as bilingual junior docents.

Michigan State University East Lansing, MI	$12,000

To support the development of a coordinated series of educational programs devoted to regional folk arts. The programs are intended to serve school groups who visit the museums. A special emphasis will be directed toward museum docents and area educators through folk arts in education workshops, the preparation of curriculum, and other education materials.

Milwaukee Art Museum Milwaukee, WI	$17,000

To support an exhibition, "Folk Art from the Milwaukee Art Museum Collection," to travel to museums throughout the state of Wisconsin. Drawn from the permanent collection, some 50 objects of American folk art including coverlets and quilts, needlework, sculpture, applied art, works on paper, and paintings will travel to six venues.

Utah Museum of Fine Arts Salt Lake City, UT	$16,900

To support a collection sharing project between the Utah Museum of Fine Arts and the Nora Eccles Harrison Museum of Art in Logan, UT. The two institutions will organize and tour an exhibition, "American Ceramics from 1950-1990," to consist of approximately 60 works (320 from each Museum's permanent collection). The former collection is strong in ceramic sculpture while the latter has emphasized the vessel tradition. The presentation of the combined collections will provide an opportunity to address the aesthetic contributions of 20th-century American ceramic artists.

Yellowstone Art Center Billings, MT	$70,500

To support a collection sharing project in which the Corcoran Gallery of Art will lend a major portion of its William A. Clark Collection to the Yellowstone Art Center and the Montana Historical Society. Clark, an early Montana senator who made has fortune in the local copper mines, used his wealth to build an art collection now at the Corcoran. The exhibition will represent the cornerstone of Montana's 1989 centennial year and will be the first time any of the collection has been seen in the state.

Davenport Museum of Art Davenport, IA	$10,900

To support the research and documentation of the Museum's previously uncatalogued collection of Mexican Colonial paintings. Included are works by Spanish painters working in Mexico between the 16th and the 19th century when it was a colony of Spain. The Museum plans to publish a full-color, scholarly catalogue and a nationwide tour of the collection in 1992 as part of the Columbian Quincentenary.

Kentucky, University of/ Art Museum Lexington, KY	$25,000

To support the publication of an illustrated handbook of the Museum's permanent collection. The collection acts as a key cultural resource for the University, the local community, and state arts organizations. The handbook will feature 1985 illustrations and will document key pieces in the collection which includes 19th-century and contemporary paintings, Pre-Columbian and African art, and works on paper.

Utah State University/Nora Eccles Harrison Museum of Art Logan, UT	$ 7,500

To support the preparation of a manuscript for a catalogue of the Museum's 20th century American ceramic collection. The collection of 900 pieces by 300 artists has an emphasis on the western United States. Well-known artists such as Peter Voulkos and Viola Frey are represented, as well as numerous Pueblo Indian artists. The eventual publication of the catalogue will increase scholarly, institutional, and public access of the works.

Museum of Arts and Sciences Macon, GA	$ 5,000

To support the purchase of works by living American artists. The Museum is planning a comprehensive series of exhibitions on the art, science, history, and economy of clay and will select works from "Contemporary Studio Works," featuring ceramics by approximately 50 Georgia artists. Among the artists to be represented are Barbara Bloom entitled "Vanitas" and a group of photographs by Richard Prince will be purchased.

North Dakota Museum of Art Grand Rapids, ND	$10,500

To support the purchase of works by living American artists. The North Dakota Museum wishes to purchase paintings and sculpture by ten artists all of whom have or will be associated with its exhibition program. Specific works by the following artists (eight of whom are from the North Dakota region) have been chosen: Peter Dean, Paul Funingsland, Carol Hepper, Marley Kaul, David Madzo, George Morrison, Brian Paulsen, Walter Piehl, and Ted Waddell.

Utah State University/Nora Eccles Harrison Musuem of Art Logan, UT	$8,000

To support the purchase of works by living American artists. The Museum proposes to continue a commitment to the development of its twentieth-century American ceramics collection by acquiring ceramic pieces by artists not presently included in the collection. Artists being considered are Rudy Autio, Robert Brady, Phillip Cornelius, David Gilhooly, Howard Kottler, Marilyn Levine, John Mason, James Melchert, Ron Nagle, Richard Shaw, Robert Sherry, and Robert Turner.

Washington State University/Museum of Art Pullman, WA	$ 3,000

To support the purchase of works living American artists. The Museum will acquire a painting by Cheryl Laemmle, a graduate of the University who has achieved recognition in major New York museums. The painting, "Untitled" (1978), was created in her last year as a graduate student; it relates closely to her current work in which animals and objects are used to create surreal yet lyrical, tableaux.

MUSEUM TOTAL: $348,100

MUSIC

Anchorage Symphony Orchestra Anchorage, AK	$5,000

To support their 1989-90 season activities, including engagement of a music director, musicians, and guest artists; touring of the full orchestra and small ensembles; and community outreach programs. The latter will educate through youth concerts, docent programs, and pre-concert lectures. The outreach will also include a tour through southcentral Alaska.

Boise Philharmonic Association, Inc. $8,000
Boise, ID

To support broadcasts of the orchestra's performances, the issuance of discounted tickets to students, free dress rehearsal tickets for disabled and disadvantaged persons, and young people's concerts in Treasure Valley, ID. Broadcasts will provide access to symphonic music for a geographically isolated population. Expansion of the young people's concerts will provide over 10,000 Treasure Valley students the opportunity to attend live concerts.

Cedar Rapids Symphony Orchestra Association $18,000
Cedar Rapids, IA

To support salaries of the string quartet for 150 services and run-out concerts to rural communities in eastern Iowa.

Fairbanks Symphony Association, Inc. $9,000
Fairbanks, AK

To support the engagement of guest conductors and artists and touring of the Arctic Chamber Orchestra to rural communities in southwestern Alaska, including the Aleutian Peninsula. Guest artists will provide workshops and participate in a pre-concert radio program.

New Mexico Symphony Orchestra $60,000
Albuquerque, MN

To support the educational program and statewide touring. The educational concerts include ensembles, instrumental demonstrations, and full orchestra concerts for 4th and 5th grade students. The touring provides a variety of programs designed to fit local needs and budgets and often times include collaborative efforts with local performing arts groups.

Vermont Symphony Orchestra Association, Inc. $20,000
Burlington, VT

To support young people's concerts in Burlington and four other Vermont communities, in-school concerts by VSO ensembles, and the performance of three contemporary American compositions for orchestra.

Health Educators, Inc./ $ 3,000
Borealis Wind Quintet
Danbury, CT

Health Educators, Inc./Borealis Wind Quintet during the 1989-90 season. Included will be school and tour concerts in rural farming communities in the Midwest and in low-income communities in the South. The Quintet will feature a new commissioned work by American composer F. Balazs.

New York Chamber Soloists, Inc. $ 3,000
Burlington, VT

To support artists' fees and related costs for chamber music concerts during the 1989-90 season. Included will be performances in rural Vermont (Chester, Castleton, and Johnson) where little chamber music is performed.

Affiliate Artists, Inc. $27,000
New York, NY

To support artists fees for the recital and "informance" (an informal, informative performance that combines performance and conversation) portions of the Xerox Pianists Program. This program places emerging American pianists in residences with American orchestras in many parts of the country. Each residency provides two weeks' employment for the artist, includes a concerto appearance with the orchestra, at least one formal solo recital, and 12-15 "informances" for audiences throughout the host community.

Affiliate Artists, Inc. New York, NY	$54,000

To support the participation of instrumentalists in Affiliate Artists' Corporate Sponsored Residency program. Artists selected to participate in the program receive residency training prior to appearing in "informances" before diverse audiences across the country. Launched in 1967, the program is co-sponsored by more than 50 national corporations and foundations.

Phoenix Art Museum	$15,000

To support the Viva Jazz ensemble's formal concerts, lecture-demonstrations, and residences by guest artists during 1989-90. Planned presentations include lectures and performances for the Scottsdale Public Schools, and concerts at the springs Jazz Fest for the City of Glendale, the Explorer Series for the City of Mesa, the Art Discovery Series for the City of Sierra Vista, and the jazz for the Phoenix Art Museum. Charlie Haden (bassist) and Dave Liebman (saxophonist/flutist) will participate as artists-in residence for the ensemble, each providing three days of master classes, rehearsal sessions, and a public performance with Viva Jazz.

MUSIC TOTAL: $222,000

THEATER

Alternate Roots, Inc. Atlanta, GA	$56,000

To support artists' fees for performances by professional theater companies and individual solo performance theater artists throughout the southeastern States during the 1990-91 performance season. These companies include Academy Theatre (GA), Great American Mime Experiment (GA), Jomandi Productions (GA), Junebug Productions (LA), The Road Company (TN), Roadside Theater (KY), and solo performance theater artists John Maxwell and Jon Spellman. States included in these tours are: Alabama, Georgia, Mississippi, North and South Carolina, Tennessee, Virginia, and West Virginia.

Appalshop, Inc./American Festival Project Whitesburg, KY	$30,000

To support presentations, through a consortium, of selected artists who illuminate the experience of four distinct cultures: African-American, Latin American, Appalachian, and Jewish. The consortium includes theater companies and presenter such as Appalshop (KY), Contemporary Arts Center (LA), Painted Bride (PA), Cornell University (NY), and others who will be presented at festivals focusing on audience diversity as well as involvement with each home community and local artists of excellence.

Mole End Puppetry Production, Inc. Springfield, MA	$ 7,625

To support the presentation of performances by professional theaters for young audiences throughout locations in western Massachusetts during the 1990-91 performance season. These companies will include Center for Puppetry Arts (GA), Child's Play (IL), Das Puppenspiel (NY), Louisville Children's Theatre (KY), Minneapolis Children's Theater (MN), TheatreWorks (NY), and Underground Railway (NY).

Roadside Theater/Appalshop, Inc. Whitesburg, KY	$16,500

To support a residency by Roadside Theater with traditional native American storytellers, singers, and dancers in Zuni, NM. The residency will include an exchange of performances and discussions exploring rural aesthetics and values in American cultural life.

Appalshop Inc./Roadside Theater $40,000
Whitesburg, KY

To support artists' compensation, training, and touring expenses in the 1989-90 season.

The Bloomsburg Theatre Ensemble $ 7,500
Bloomsburg, PA

To support the expenses of the 1989-90 season of production.

Dell'Arte, Inc. $17,500
Blue Lake, CA

To support artists' salaries and project costs during development, performance, and touring of original work by the ensemble in the 1989-90 season.

El Teatro Campesino, Inc. $27,500
San Juan Bautista, CA

To support expenses associated with productions in the 1989-90 season.

Independent Eye, Ltd. $12,500
Lancaster, PA

To support expenses during the 1989-90 season.

Lime Kiln Arts, Inc. $ 7,500
Lexington, VA

To support the production expenses during the 1989-90 season.

Mad River Theater Works $ 5,000
West Liberty, OH

To support the expenses associated with the 1989-90 season.

Magic Theatre Foundation $45,000
Omaha, NE

To support production expenses, artists' fees and salaries in the 1989-90 season.

NH Mime Co. Dance Theatre East Pontine Mvt. Theatre $10,000
Portsmouth, NH

To support the expenses associated with the 1989-90 season of production.

People's Light and Theatre Company $10,000
Malvern, PA

To support expenses associated with the 1989-90 season of productions.

Perseverance Theatre, Inc. $30,000
Douglas, AK

To support mainstage production expenses in the 1989-90 season.

The Road Company $15,000
Johnson City, TN

To support artistic salaries and expenses associated with the development of new work and touring in the 1989-90 season.

Vigilante Players, Inc. $ 5,000
Bozeman, MT

To support expenses related to the 1989-90 production season.

THEATER TOTAL: $342,625

CHALLENGE/ADVANCEMENT

Southern Arts Federation, Inc. $100,000
Atlanta, GA

To develop rural and minority arts in the South through a multi-year initiative to build an infrastructure of minority arts producing organizations and rural arts centers; and to support regional tours of Southern indigenous art. The initiative is designed to be a model for program development within a framework of innovative partnerships which can be replicated in other parts of the United States.

Kentucky Educational Television $250,000
Lexington, KY

To increase access to and participation of the performing arts in Kentucky by broadcasting high-quality regional arts performances. The direct costs of major broadcasts during the Challenge period are expected to total $1.5 million. KET plans to get aside $500,000 as a permanent revolving fund for production of new, grassroots programming. KET's long-term goal is to broadcast five or six major regional performing arts productions each year. In addition, KET wishes to begin to broadcast programs that fall outside the more traditional art forms and programs offered by smaller arts organizations.

Monadnock Music $50,000
Peterborough, NH

To establish a new listeners' program, "Lend an Ear," which will bring music into the lives of of people who otherwise would have little or no experience with music. "Lend an Ear" will address young people, in-school programs, and family concerts with an emphasis on close interaction between audience and performers to cultivate an active audience. Individual musicians and small ensembles will give performance demonstrations at centers for youths with disabilities, in correctional facilities, at town halls churches, and in public schools. This new program will complement and provide a bridge to summer festival activities, and will become an integral part of the programming at Monadnock.

Ballet West $500,000
Salt Lake City, UT

To reach underserved communities by implementing a unique touring model involving full company performances in "hub" urban areas combined with split-company touring to outlying communities ("spokes") with technically limited performance facilities. The two smaller ensembles will present less elaborate ballet productions which are designed for flexibility but maintain high professional standards. The company hopes to achieve a 20 percent increase in audiences served and to re-establish a regular touring circuit to the hub cities.

University of Wyoming Art Museum $400,000
Laramie, WY

To promote greater access for the people of Wyoming to visual arts programs through the construction of a major new art museum facility. The building will provide a place to exhibit a full spectrum of visual arts not presently seen in this area, allowing several exhibits to be shown simultaneously, and providing exhibition space for important regional artists. By increasing the quality and quantity of its programs, the Museum will attract a broader audience.

There are a few Advancement organizations in Phase I of the Program that have been designated as having a potential rural impact. However, since they have not been awarded a grant at this time, we have not listed them.

CHALLENGE/ADVANCEMENT TOTAL $1,300,000

ARTS IN EDUCATION

New Hampshire State Council on the Arts $19,500
Concord, NH

To provide funds to initiate a statewide arts education plan. The planning grant will be used to conduct nine field surveys of specific targart groups for baseline information on current aspects of arts education services; recruit a statewide steering committee which will guide the process and prepare recommendations for a planning document; present the recommendations of the planning document to the State Board of Education to justify the approval of funds in the State Department of Education's FY 1992-1993 budget; and to prepare the AISBEG Implementation Grant application to initiate the final planning document's recommendations.

South Dakota Arts Council $10,000
Sioux Falls, SD

To support an assessment of current arts education resources and needs, three planning task force sessions, and a project facilitator. A fifteen-member task force will conduct surveys through site visits, and various advocacy effects will be undertaken. The Dakota Centennial Arts Congress will draw state, regional, and national arts education leaders together, permitting presentation of project goals to the public and serving as an orientation for the task force. The second task force meeting will focus on evaluation of the needs assessment and selection of sites to participate in a pilot program, and the third session will entail planning of teacher-education workshops.

Wyoming Council on the Arts $20,000
Cheyenne, WY

To develop activities and processes which will assist the State Arts Agency, the State Department of Education, and other arts advocate groups in developing a statewide K-12 arts curriculum guide. Activities include assessing current arts programs in the state, researching the existing arts evaluation systems in the state, developing a five-year arts education plan and corresponding fine arts tests, and developing a statewide arts-in-education advocacy support program for the curriculum guide and the implementation of the five-year plan.

Alaska State Council on the Arts $22,500
Anchorage, AK

To support, through a one-year grant, a series of informational arts in education meetings, teacher-training workshops, and the development of curriculum material specifically dealing with Alaskan Native arts. The Council on the Arts would convene three meetings with key arts education advocates and organizations to facilitate communication, share and review organizational plans, and develop public awareness strategies. A talent bank consisting of artists, arts educators, principals, and classroom teachers would be created to provide technical assistance, including preservice and in service teacher-training workshops, as part of a new Teacher Training Workshop Program. The grant would enable the Council to address the identified need for curriculum materials in traditional and contemporary Native arts education. The first concerted effort to collect material on Native Alaskan arts education would involve Native leaders and educators, the Council's Native Arts staff director and Traditional Native Arts Panel, and the Institute of Alaska Native Arts.

Illinois Arts Council Chicago, IL	$127,500

To support, through a three-year grant, a new ArtsResource grant program and evaluation of existing Arts Council education activities. ArtsResource would provide funds for school districts to initiate curriculum or staff development projects. The Arts Council would develop a resource roster of artists, educators, and education professionals, employing a new staff member and consultants to assist with this and other aspects of the project. An existing steering committee consisting of representatives of the Arts Council, State Board of Education, and Illinois Alliance for Arts Education would oversee and participate in AISBEG program activities. An evaluation mechanism consisting of ongoing planning, development, review, and revision would focus on the ArtsResource grant program during the first year and expand to all Arts Council arts education programs by the end of the grant period. A consultant would assist in the development and refinement of evaluation procedures.

Iowa Arts Council Des Moines, IA	$85,000

To support, through a two-year grant (three-year funding was requested), activities designed to make the arts a part of basic education. The Arts Council and State Department of Education would establish a structure for information development, including a task force to coordinate planning and evaluation of the project, an annual conference, and seven planning teams to continue research and information compilation in each of the seven target areas: curriculum development, conditions and practices, outside arts resources, assessment and evaluation, dance and theater curricula, model programs, and technology. Curriculum development would be expanded, and the State curriculum guide would be evaluated, reprinted, and disseminated. The Arts Council would compile and distribute a resource book, expand or initiate programs with an emphasis on reaching rural and special populations, and create a computerized communication network to assist information exchange. One planning team would examine and develop goals and procedures for evaluating arts education in the State. The Arts Council would award assessment research grants and conduct a statewide arts education survey. The model program team would identify and evaluate existing model sites, while the Arts Council would provide grants to initiate or expand model comprehensive, sequential arts education projects. A technology fair and exploration of ways to reach rural populations, such as through telenetworks and a fiber optics networks, would be sponsored.

Kansas Arts Commission Topeka, KS	$137,250

To support, through a three-year grant, implementation of a program focused on public information and awareness, training, and development of resources and programs. A recently formed Arts Task Force will review the status of arts education, current policies, and guidelines, and will make recommendations to the State Board of Education. An Implementation Steering Committee would oversee the project. The Arts Commission would work with other statewide education and local arts agency organizations to promote a newtwork of advocacy information about the arts-as-basic-in-education programming around the State. A statewide public awareness campaign would feature a new video, expansion of the Kansas Alliance for Arts in Education newsletter, solicited articles, and structured presentations. The need for training would be addressed by a one-week administrator's seminar, in services and workshops, and a statewide AIE conference. The AISBEG award would allow development of the following resources: three arts program development guidelines (theater/creative drama, dance/creative movement, creative writing), three monographs concerning the benefits of the arts for individuals with disabilities, and an arts resource directory. The Arts Commission would create a new regranting program to provide funds to school districts to plan and implement basic, sequential arts education programs.

Michigan Council for the Arts Detroit, MI	$150,000

To support, through a three-year grant, continued statewide planning and coordination, arts education leadership at the local level, public awareness, and training. The Michigan Arts in Education Coalition, consisting of five statewide arts and education organizations, would oversee the implementation phase. A total of 15 sites would be selected to participate in the Local Leaderships for Educational Arts Planning (LLEAP) Program. Broad-based community teams would be selected and trained to develop strategic plans for making the arts a part of basic education in the schools. They would build plans for action in the areas of advocacy, professional development, curriculum, and funding. A media marketing and public relations campaign would provide statewide visibility for arts education and assist the local LLEAP efforts. Training opportunities would be provided through an annual summer institute for K-6 classroom teachers and arts specialists. In addition, annual meetings of the arts and education deans would permit dialogue on standards for training and certification of teachers.

Nebraska Arts Council Omaha, NE	$90,000

To support, through a two-year grant, implementation of a program focusing on curriculum development; staff development; research, reporting, and marketing; and public information. A statewide survey has identified 23 school districts willing to commit additional staff and financial resources toward making the arts a part of basic education. These districts would receive matching funds to develop sequential curricula in the visual, performing, and literary arts. Each preparing a five-year plan for district implementation. Simultaneously, the Nebraska Department of Education would begin the development of curriculum frameworks and would train staff through a three-week summer institute focusing on curriculum development. The Arts Council would employ an arts education information, and provide technical assistance and resource publications. The Arts Council would work in conjunction with the Nebraska Alliance for Arts Education on a public information campaign to increase awareness of the arts as basic in education.

New York State Council on the Arts New York, NY	100,000

To support, through a two-year grant (three-year funding was requested), initial implementation of sequential arts programs in a rural elementary school and four inner-city alternative high schools and to develop a test for curriculum effectiveness. An elementary school in the rural, economically depressed Adirondack region would develop and introduce a sequential arts education program for grades 4-6, provide staff development opportunities for artists and teachers, and integrate local cultural resources into the curriculum. Four alternative high schools in the Bronx would develop a multi-year sequence of arts courses, with a an emphasis on examining the arts and culture of various ethnic groups. Local cultural organizations would work with the Bronx schools, and consultants would develop seminars for participating teachers and artists. To address the need for student assessment, and the related need to evaluate the effectiveness of curriculum and learner results, the Council on the Arts would support the ongoing research efforts of Bard College to determine the effectiveness of a sequential, multi-disciplinary arts program (grades 2-5) at a selected school in a semi-rural county. During the grant period, children would be tested, teachers trained to administer the test, the current curriculum examined, and curriculum changes implemented.

Edisto District Schools Cordova, SC	$14,400

To support the implementation of a comprehensive, sequential arts curriculum benefitting approximately 20,960 students and 65 teachers in a rural location. This project will also provide cultural opportunities and experiences using local resources for all students, and will provide additional opportunities for artistically gifted and talented students. An instructional methodology guide and a handbook of local arts resources are examples of products expected to result from this project.

Flynn Theatre for the Performing Arts Burlington, VT	$14,760

To assist general classroom teachers with the integration of the arts into the curriculum (grades 1-8) by building on community and university resources. In service workshops and resource materials covering performing arts literacy, knowledge of historical and cultural context, aesthetic judgment, and methods to teach and learn through direct creative experience in the various media will be developed using the Flynn Theatre's performance series as a primary teaching source. Faculty members from the University of Vermont will teach the workshops and will review the resource material developed.

Kentucky Educational Television Lexington, KY	$28,100

To support the production of a television series designed to make creative dramatics accessible to all students and to prepare teachers better to provide such experiences for their students. The project will consist of ten 15-minute segments on creative dramatics for upper-elementary students and three in service programs for elementary teachers that will help them integrate creative dramatics into their curricula. The series will be accompanied by instructional materials.

Seneca Indian Historical Society Irving, NY	$16,800

To support development and implementation of a K-12 curriculum model for teaching Native American arts and Seneca learning skills in in the public schools of Western New York. This project will be carried out by the Wolf Teaching Lodge, which is the repository of the ancient Seneca methods of teaching and learning. Pilot courses will be developed by Native elders and school administrators, and will include Native arts and crafts and materials as well as video documentation of the elders' classes.

ARTS IN EDUCATION TOTAL: $835,810

STATES

Arizona Commission on the Arts Phoenix, AZ	$24,000

To provide technical assistance and professional development for the ten tribal museums and cultural centers on reservations throughout rural Arizona. The tribal museum assessment program has been developed in close collaboration with the Arizona State Museum, ATLATL, and tribal groups and will utilize approaches which take into account the special needs of tribal museums.

Kansas Arts Commission Topeka, KS	$25,000

To support an intensive rural arts development program. The program will include a circuit rider who will assist with the formation, development, planning and programming of rural organizations. It will also include awards of up to $10,000 to underwrite programmatic and administrative costs of a limited number of rural arts organizations and awards of up to 1,000 for program activities involving local resources.

Minnesota State Arts Board St. Paul, MN	$25,000

To enable the State Arts Board to join with two of Minnesota's multi-county regional arts councils in providing advancement support to three groups with potential to be model rural arts organizations. The three organizations will each receive intensive consultant assistance matched to their individual needs. Consultants will be chosen from the fields of architectural planning, facility development, fundraising, rural arts development, governmental funding, tax planning, and personnel development.

New York State Council on the Arts New York, NY	$11,900

To assist rural arts organizations in the design, development, and maintenance of cultural facilities. The project will involve one-day workshops in four rural regions, involving speakers experienced in the planning, construction, design, and execution of capital construction projects for rural arts organizations. Workshops will incorporate local projects as case studies.

South Carolina Arts Commission Columbia, SC	$20,000

To develop and publish a comprehensive action plan for the cultural revitalization of rural communities. In developing the plan, a broadly inclusive group of arts and community leaders will primarily focus on ways to promote working relationships and linkages of resources among those committed to improving life in rural communities. The project will also involve extensive research on the arts in rural communities to determine best practices and exemplary models.

South Dakota Arts Council Sioux Falls, SD	$15,000

To bring arts programs to communities in presently unserved counties of South Dakota. A two-member Touring Arts Team, comprised of solo performing artist and visual, folk, or literary artist, will offer five-day residencies. Touring arts teams, which utilize artists drawn from the state's Touring and Artists in Schools programs, will be booked into 15 communities. South Dakota's project is based on a successful model developed by the Iowa Arts Council.

Vermont Council on the Arts Montpelier, VT	$25,000

To support artist residencies of two to three weeks in 15 to 20 rural towns. Artists will work with community members to create original works of art inspired by town history, current issues, or aspirations for the future. The resulting work, which might involve exhibits, performances, literature, or public art, will be presented to the community on Town Meeting Day. Among other things, the project will stimulate the creation of works of art on themes important to rural townspeople and begin to reintegrate the arts into rural community life.

STATES TOTAL: $145,900

LOCALS

Division of the Arts, Dept. of Culture, Recreation, and Tourism $25,000
Baton Rouge, LA

To support a new staff position of Multi-Cultural Arts Coordinator and other costs related to the creation of a Rural/Multi-Cultural Arts Program. The program would include a statewide assessment of the developmental needs of Louisiana's rural arts agencies, special technical assistance workshops, the establishment of a statewide multi-cultural arts network, and two conferences.

LOCALS TOTAL: $25,000

NEW MEXICO

Eight Northern Indian Pueblos Council $16,300
San Juan Pueblo, NM

Support to develop: 1) crafts demonstrations for the Eight Northern Indian Pueblos Arts and Crafts Fair; 2) educational materials on the artists and art forms present [illegible] Fair; and 3) a long-range plan to involve Pueblo youth in the learni[illegible]roduction of Pueblo crafts.

International Folk Art Foundation $18,000
Santa, Fe, NM

To support educational programming to complement the inaugural exhibition of the Museum's new Hispanic Heritage Wing. The programming includes community outreach and docent training aimed at bilingual speakers and high school students. Twelve communities have been targeted for outreach due to the artistic significance of their historic church architecture (18th and 19th centuries) and religious folk art. Curatorial presentations will be made following religious services and will include a slide presentation of New Hispanic Heritage Wing and the Musuem's Hispanic collections. A museum-sponsored trip to view the exhibition "Familia y Fe (Family an Faith)" will conclude each outreach program, with tours led by the new bilingual docents. High school students will be selected for scholarships to train as bilingual junior docents.

La Compania de Teatro de Albuquerque $ 4,500
Albuquerque, NM

To support a long-play album by Los Reyes de Albuquerque of the traditional dance music of northern New Mexico and southern Colorado

$11,700

To support a 16mm film on the music and life of northern New Mexico corrido composer and singer Juan Roybal.

$ 4,700

To support a series of presentations of traditional northern New Mexico Hispanic music at senior citizen centers throughout New Mexico.

New Mexico Community Foundation $48,900
Santa Fe, NM

To support the current phase of a project aimed at preserving the adobe churches of New Mexico. After three years of experience, the New Mexico Community Foundation believes that the best way to stop the deterioration of adobe churches is to empower communities to preserve their own churches. The organization intends to: 1) conduct community workshops in adobe preservation; 2) develop preservation plans for nine more churches; 3) extend the architectural survey of historic churches into mideastern New Mexico; 4) continue to inform the public about the crisis; 5) publish two more issues of the newsletter; and 6) expand the directory of free or donated resources available for church preservation, and match these to community needs.

Pueblo of Zuni Arts & Crafts $27,500
Zuni, NM

To support a travelling exhibit of Zuni carved fetishes, organized by the Pueblo of Zuni and the Maxwell Museum of Anthropology, Albuquerque, New Mexico.

Recursos de Santa Fe $18,200
Santa Fe, NM

Support to document the many important Hispanic folk art artifacts found in rural churches and moradas throughout northern New Mexico.

School of American Research $23,000
Santa Fe, NM

Support for a program of travel and-subsistence subsidies for southwest Native American traditional artisans and artists to study the extensive collection of American Indian art at the School.

Taos Spring Arts Celebration Assn. $ 3,000
Taos, NM

Support for a week-long exhibit and live presentations of traditional Hispanic New Mexican furniture making.

Wheelwright Museum of the American Indian $31,200
Santa Fe, NM

Support for two 16mm films (28 minutes each) documenting the culture, beliefs, and traditional pottery making of the San Ildefonso Tewa Pueblo people of New Mexico, as personified in the life of their world-famous potter, the late Maria Martinez and her lineage.

SUBCOMMITTEE RECESS

Chairman BYRD. I thank you very much. The subcommittee will stand in recess until 2:30 p.m., Tuesday, June 12, when we will hear testimony from the Secretary of Energy, Hon. James D. Watkins, and from congressional witnesses.

[Whereupon, at 5:42 p.m., Wednesday, June 6, the subcommittee was recessed, to reconvene at 2:30 p.m., Tuesday, June 12.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

TUESDAY, JUNE 12, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:50 p.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, Reid, McClure, and Domenici.

CONGRESSIONAL WITNESSES

OPENING REMARKS OF CHAIRMAN BYRD

Chairman BYRD. The subcommittee will come to order. This is the time scheduled for the Department of the Interior and Related Agencies Subcommittee to receive testimony from congressional witnesses and from the Secretary of Energy, James D. Watkins, regarding matters under the subcommittee's jurisdiction and related to our deliberations on the fiscal year 1991 budget.

We will receive testimony from Members of the Senate in the following order: Senator Conrad Burns, Senator Kit Bond, Senator John McCain, Senator Alan Cranston, and Senator Pete Wilson.

We will attempt to accommodate any requested changes to that order of appearance as time permits if we have such requests. And, after these Members have had an opportunity to address the subcommittee, the subcommittee will then receive testimony from the Secretary of Energy.

STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Chairman BYRD. At this time, I would like to call the subcommittee's first witness, Senator Conrad Burns.

Senator BURNS. Thank you very much, Mr. Chairman. Mr. Chairman, in the interest of time—and I know you have a loaded calendar today—I will just walk through some of the items that I think are very important, not only to the State of Montana but also to this country.

Chairman BYRD. Senator, you may proceed to read your statement, or you may proceed to capsulize it.

Senator BURNS. I thank the chairman. As you know, I come from a natural resource based State of which the Federal Government owns approximately 35 percent of the land.

I want to express my opposition first to the President's proposal to eliminate the below-cost timber sales on a dozen national forests. The Beaverhead National Forest in Montana has the dubious honor of being included in that proposal.

Contrary to what one may think about reducing below cost sales, this proposal will not save the Government 1 cent. I know that Senator McClure of Idaho has already addressed this issue at some length, so I will not elaborate.

I just hope that the subcommittee will take a close look at the impacts this proposal will have on local communities and these forests. Any time we talk about anything that happens on public lands, we have to take into account not only the economic impact on a community but also the social impact on that community as well.

Next, I will just briefly mention three specific requests that I hope the subcommittee will consider for inclusion in the fiscal year 1991 budget. I am requesting $100,000 for the National Park Service to do a study on how best to preserve Virginia City, MT.

Virginia City is the most authentic western ghost town that I have ever seen. It truly reflects the boom and bust forces of mineral exploration of the 1800's. It's also an important tourist site which attracts many visitors from within Montana and, of course, outside of Montana.

It's an important national historic landmark. It has been preserved by private sources for the past 50 years who now want to get rid of that responsibility.

A $100,000 for the Park Service study of alternatives would identify private, local, State, and Federal alternatives for the preservation and management of this historical town.

Second, I would like to request the subcommittee's support of full funding of the MHD program under the Department of Energy. This technology will provide, and is, a new economical way to reduce sulfur dioxide emissions associated with the burning of coal for energy.

It's my understanding that the research on this effort has reached a particularly critical stage. Especially in light of recent clean air legislation, we have to learn to use that resource better. After all, it is one of the great resources of this country.

The Congress has funded this effort for the past 3 years. I think it would be unfortunate not to complete the development of such promising technology.

The completion of this program will have spinoffs that will pay dividends many times over.

I would also ask the subcommittee to restore funding for the MHD program which is authorized at $45.5 million for fiscal year 1991.

Finally, I would like to put in one last plug for a worthwhile parochial and, yes, Montana project. This project is the Lewis and Clark National Historic Trail Interpretive Center in Great Falls, MT.

This year, I am requesting $2.2 million for the Forest Service to complete the design work, the road work and the utilities for this project in this important project. This is a unique historical center that will bring to life the experiences of Lewis and Clark as they encountered one of the first major obstacles of their journey which was the portage around Great Falls.

The State and local contribution for this project has been tremendous. It is my hope that we can do our part at the Federal level by appropriating the $2.2 million for this worthy effort to preserve the course of history.

Thank you, Mr. Chairman, for this time and your consideration to these matters. Thank you.

Chairman BYRD. Thank you for your statement. Does anyone have any questions? Senator Reid?

Senator REID. No.

Chairman BYRD. Senator Domenici?

Senator DOMENICI. I have no questions, Mr. Chairman.

Chairman BYRD. Thank you very much, Senator Burns, for your statement.

Senator BURNS. Thank you very much, Mr. Chairman.

STATEMENT OF HON. CHRISTOPHER S. BOND, U.S. SENATOR FROM MISSOURI.

Chairman BYRD. The next senator is Senator Kit Bond of Missouri. Senator Bond, we will be happy to have you place your statement in the record or read it in its entirety.

Proceed in any way you wish.

Senator BOND. Thank you, Mr. Chairman, and members of the committee. I would ask that you receive the full statement as presented. That will enable us to move in summary fashion at a more rapid pace.

Chairman BYRD. Without objection, it will be included.

Senator BOND. Mr. Chairman, the most important request I have to make today is to support the U.S. Forest Service North Central Forest Experiment Station Field Laboratory, to be located at Columbia, MO. It would provide benefits to 14 additional States in the north central region which have the 100 million acres of oak, hickory, and other hardwoods.

This research center will generate much needed information about emerging environmental and social issues, atmospheric pollution, global warming, water quality, and many others. They study integrated forest management and study the landscape patterns created through forest management and the reproductive successes of neotropical migrant birds, examine the special habitats for endangered and sensitive species and delve into the importance of fires, a tool in the regenerative process.

It will gain information on the very difficult topic of oak tree reproduction and examine techniques for planting trees to lower the cost and increase the success. Soil ecology and old growth forests and other rare communities will also be investigated.

The Forest Service has indicated that the research laboratory is their No. 1 priority for research construction when funds become available. The funding of this project would continue a history of over 30 years of outstanding collaboration between the U.S. Forest Service and the University of Missouri scientists.

The total cost of the project is $14.3 million with $10.8 million of that to be derived from State and private funds; 25 percent of the funding is already in place from private and university resources.

And, I have been advised by former colleagues in the Missouri State Legislature that funding for the remaining 50 percent of the project would be forthcoming in the next year.

I believe that the University of Missouri and its College of Agriculture are unique among land grant institutions, in that they provide a substantial portion of needed funds before requesting Federal and State commitments.

The construction phase is ready to begin and only awaits Federal funding.

Mr. Chairman, I also would join in providing support for the North American Wetlands Conservation Act which was authorized as an annual appropriation of $15 million. I am advised that the funds available through the Fish and Wildlife Service would be put to excellent use through an ongoing program in Missouri which is called a design for conservation and similar programs in other States.

PREPARED STATEMENT

Thank you very much for your time. And, I would be pleased to respond to any questions if there are any.

[The statement follows:]

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Mr. Chairman, I thank you and the other members of this subcommittee for giving me the opportunity to present my views regarding fiscal year 1991 appropriations. I will highlight some of the issues I believe warrant the subcommittee's consideration.

Central Forest Experiment Station

I strongly support the U.S. Forest Service North Central Forest Experiment Station Field Laboratory. The laboratory would be located in Columbia, Missouri and will provide benefits to fourteen other states throughout the North Central region. The Central Hardwood Forest spans most of the eastern United States and includes 100 million acres of oak, hickory, and other hardwoods.

This regional research center will generate much needed information about emerging environmental and social issues, including atmospheric pollution, global warming, water quality. **More Specifically:**

New Knowledge for Integrated Forest Management - We need a greater understanding of the opportunities, techniques, costs, benefits, and tradeoffs associated with management for all forest values. Recreation, wildlife, watershed protection, and maintenance of unique ecosystems are just a few of the items important to Central Hardwood Region.

Biodiversity and Forest Fragmentation - Study the landscape patterns created through forest management and the affect certain plant and animal populations.

Forest Interior Birds - Evaluate the reproductive success of the neotropical migrant birds.

Threatened, Endangered, and Sensitive Species - Require special habitats within the Central Hardwood Forest. The bald eagle, Indiana bat, the grey bat, and the black bear are just a few in concern.

Fire Ecology - The importance of fire as a tool in regenerating productive oak forests and in maintaining unique savannah, glade, and barrens communities should be investigated.

Oak Reproduction - Knowledge of how to obtain adequate oak reproduction is one of the most long standing and difficult research problems facing scientists in the Central Hardwood Region.

Tree Planting - Investigate a wide range of techniques to increase the success and lower the cost of planting trees.

Soil Ecology - Understand how plants compete for moisture and nutrients and the role of microbes, fungi and insects.

Old-Growth Forests and Other Rare Communities - Investigate how other forests will change over time and learn more about the unique plant and animal communities.

The Forest Service indicated that the research laboratory is their number one priority for research construction when funds become available. The Forest Service would receive exclusive use of 16 offices and 2 laboratories, and several other work areas; all free of rent and utilities in perpetuity. In addition, they would share additional laboratory, storage, and conference space with the University of Missouri. This would continue a history of over 30 years of outstanding collaboration between the U.S. Forest Service and University scientists.

The total cost of the project is $14.3 million with the $10.8 million derived from state and private funds. Twenty-five percent of the funding is already in place from private and University resources. I have had strong indications from the Missouri State Legislature that funding for 50% of the project will be forthcoming in the next year.

The University of Missouri and the College of Agriculture are unique among land-grant institutions by providing a substantial portion of the needed funds in this manner before requesting federal and state commitments. The construction phase of the project is ready to begin and awaits only the appropriation of federal funding.

North American Wetlands Conservation Act

Also, the passage of the North American Wetlands Conservation Act authorized an annual appropriation of $15 million. I would ask that you provide full funding for its implementation.

Mr. Chairman, additional information of these projects has been attached to my testimony. I thank you for giving me this opportunity to appear before this Subcommittee. I will be happy to answer any questions you might have and look forward to working with you and your staff in the months ahead.

COOPERATIVE FOREST SCIENCES/NATURAL RESOURCES RESEARCH CENTER

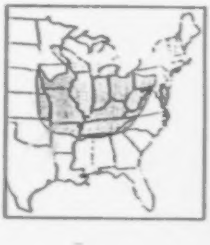
Project

To develop a regional research center to produce information about major environmental issues facing the Central Hardwood Forest region.

A facility is needed to house a North Central Forest Experiment Station field laboratory and the University of Missouri School of Natural Resources. It will be home for over 50 cooperating scientists and faculty. Total area: 70,000+ square feet.

Importance

The Central Hardwood Forest spans most of the eastern United States and includes 100 million acres of oak, hickory, and other hardwoods. The region provides a habitat for hundreds of species of wildlife and is the source of some of the finest hardwood lumber and veneer in the world. This unique forest area also encompasses one of the most populated regions of the country.



The regional research center will produce information about emerging environmental and social issues, including atmospheric pollution, global warming, biological diversity, water quality, wildlife and timber management, agroforestry, and forest resource protection.

Research Partnership

Through the North Central Forest Experiment Station, the Forest Service has been cooperating in forestry research with the University of Missouri-Columbia and other institutions for more than 30 years. The new building will symbolize a continued commitment to forestry and the environment and will anchor the research efforts for the Central Hardwood Forest region.

Research partnerships between the federal government and leading research institutions are increasingly important in the quest to merge scientific expertise and needed facilities to more efficiently tackle the broad spectrum of environmental issues. Through such partnerships, scientists can meet the demands for new information in the rapidly changing social, economic, and resource enviror ment of the coming decades.

Funding The building project has secured private and state support. The Anheuser-Busch Foundation has donated $1.5 million, and the State of Missouri is expected to provide $7.8 million. The University's Board of Curators has allocate $1.5 million and has approved the building schematics. A federal contribution of $3.5 million is necessary to complete the project.

The Forest Service has recognized the significance of this project, and Chief Dal Robertson has made the facility one of the organization's top construction prior ties.

RESEARCH AT THE PROPOSED COOPERATIVE FOREST SCIENCES/NATURAL RESOURCES CENTER

The proposed regional research center to house the North Central Forest Experiment Station Field Laboratory and the University of Missouri School of Natural Resources will provide the facilities necessary to allow Forest Service and University scientists to address a number of important environmental and ecological issues. These include:

New Knowledge for Integrated Forest Management - Recreation, wildlife, watershed protection, and maintenance of unique ecosystems are issues of increasing importance on forest lands in the Central Hardwood Region. In some areas, public lands are the only large tracts of contiguous forest that still exist, and as such they are of special importance. Greater understanding is needed of opportunities, techniques, costs, benefits, and tradeoffs associated with management for all forest values.

Biodiversity and Forest Fragmentation - Forest fragmentation and other changes in land use patterns have significant impacts on the abundance and diversity of forest plants and animals. We know that landscape patterns created through forest management can dramatically affect certain plant and animal populations, but we don't know the extent of the impact or how to effectively mitigate the impact.

Forest Interior Birds - Neotropical migrant birds such as the ovenbird, the worm-eating warbler and the Kentucky warbler breed in the Central Hardwood Forest and winter in Central America and the Caribbean Basin. Many of these species have been declining in the Eastern U. S. We need to evaluate reproductive success of these species in Central Hardwood forests, particularly how reproductive success is related to land use patterns.

Threatened, Endangered, and Sensitive Species - A number of threatened, endangered or sensitive species require special habitats within the Central Hardwood Forest. In addition to some of the neotropical migrant birds, the Indiana bat, the grey bat, the black bear and the bald eagle are animals of concern in parts of the Central Hardwood Region. There is also concern over numerous plant communities.

Fire Ecology - Historically, fire has been a powerful force shaping the composition of the existing hardwood forest. The exclusion of fire from the forest ecosystem has contributed to a dramatic shift from oak to other less commercially desirable species over the past two decades. The importance of fire as a tool in regenerating productive oak forests and in maintaining unique savannah, glade, and barrens communities must be investigated.

Oak Reproduction - Oaks are the dominant species throughout the Central Hardwood Forest. They provide forest products and abundant food and cover for many species of wildlife. Knowledge of how to obtain adequate oak reproduction is one of the most long standing and difficult research problems facing scientists in the Central Hardwood Region. Efforts will be directed at oak physiology, seed production, tree planting, and cultural techniques to establish oak reproduction.

Tree Planting - Scientists will investigate a wide range of techniques to increase the success and lower the cost of planting trees for reforestation, for plantations of high valued species such as black walnut, and for agro-forestry systems.

Soil Ecology - Many important forest processes take place below the ground, yet our knowledge of below ground ecology is miniscule. A holistic understanding of forest ecosystems will occur only when more is known about how plants compete for moisture and nutrients below the ground and about the role of microbes, fungi and insects in the process.

Old-Growth Forests and Other Rare Communities - Most forests in the Central Hardwood Region have been disturbed by past harvesting and grazing. By studying the few remaining old-growth hardwood communities, scientists will learn more about how other forests will change over time and more about the unique plant and animal communities associated with the old-growth remnants in the Midwest.

LETTER FROM ROGER L. MITCHELL, DEAN, UNIVERSITY OF MISSOURI-COLUMBIA

June 1, 1990

The Honorable Christopher S. Bond
293 Russell Building
Washington, D.C. 20510

Dear Kit:

I would like to share with you this letter as an official request for the $3.5 million in FY'91 to build a Forest Service research facility for the Central Hardwoods in Columbia, Missouri. I have written Dr. J. Patrick Jordan, CSRS/USDA, to confirm our request from the College of Agriculture for a Forest Service partnership in construction funding.

This project is our top and only priority for Federal capital funds in the College of Agriculture. Completion of the Natural Resources Building, to include the Forest Service Laboratory, will continue a history of over 30 years of outstanding collaboration between the U. S. Forest Service and University scientists.

Twenty-five percent of the funding is already in place from private (Anheuser-Busch) and University resources. We believe the University of Missouri-Columbia and the College of Agriculture are unique among land-grant institutions by providing a substantial portion of the needed funds in this manner before requesting Federal and State commitments.

It is our belief that State funding for 50% of the project will be forthcoming in the next year if we can demonstrate this Federal commitment for FY'91. Attached is State Senator Roger B. Wilson's (Chair, Senate Appropriations) letter of intention for State funding in the 1991 General Assembly. He notes Federal funding is needed before the State request will be made.

Thanks so much for your consideration of this request.

Sincerely yours,

Roger L. Mitchell
Dean

Chairman **Byrd**. Thank you, Senator Bond, for your excellent testimony. Your statement will be helpful to the subcommittee as we mark up our bill. We will certainly look at your statement in its entirety very carefully.

Is there any Senator that wishes to ask any questions or make any comments? Senator Reid?

Senator **Reid**. No, Mr. Chairman.

Chairman **Byrd**. Senator Domenici?

Senator **Domenici**. Mr. Chairman, only to say that I do thank the Senator for his testimony. I think it has very broad based concepts with more than one State application. And, they deserve consideration.

I thank the Senator for his excellent testimony.

Chairman **Byrd**. Thank you, Senator Bond.

Senator Bond. Thank you very much, Mr. Chairman, and members of the committee.

STATEMENT OF HON. JOHN McCAIN, U.S. SENATOR FROM ARIZONA

PREPARED STATEMENT

Chairman **Byrd**. The next Member will be Senator John McCain of Arizona. Senator McCain, we are very glad to have your testimony.

If you wish, read your statement into the record or if you wish it to be included, just proceed. Either way you wish would be fine.

Senator **McCain**. Mr. Chairman, I would appreciate it if my full statement would be made part of the record. And, I would like to summarize as much as possible, recognizing how busy the committee is.

Chairman **Byrd**. Without objection, your statement will appear in its entirety.

[The statement follows:]

Statement of Senator John McCain

Mr. Chairman, I appreciate the invitation to appear today on behalf of myself and the distinguished chairman of the Select Committee on Indian Affairs, Senator Inouye. The concern that brings me before your committee is the declining level of appropriations for programs that affect our Nation's most needy citizens, Indian and native Americans.

Under the leadership of Senator Inouye, the Select Committee on Indian Affairs has undertaken a study of Federal spending for Indian programs. The results, covering the past 15 years and prepared by the Congressional Research Service, are shocking—Indian programs have all suffered much deeper cuts than comparable Federal programs for non-Indians. This has occurred despite the evidence that Indian people have the worst health, education, and housing status of any group of Americans and despite the fact that the United States has an abiding trust responsibility for Indian tribes and Indian people.

The first area of concern is the Bureau of Indian Affairs. The Indian Affairs Committee is recommending an increase of $221 million over the administration's request. Within the requested increases for the Bureau of Indian Affairs I would like to emphasize, as general priorities, funding for education, law enforcement, social services and natural resources protection.

Of particular importance is funding for Indian education. It is significant to note that funding for Indian schools—those administered by the BIA and by tribes—comes almost totally from Federal sources. This compares with the average public school district which receives less than 10 percent of its funds from Federal sources.

My personal concern is that spending on Indian education is low, both in absolute terms, and also when compared with spending trends in education generally. Since 1985, expenditures for children in public schools have grown by 37 percent, while the funding for the Indian weighted student unit has increased by only 19 percent. States in constant dollars, spending on BIA education has fallen by 4 percent per year from fiscal year 1975 through fiscal year 1991 at the same time as the Indian population has grown dramatically. Substantial increases are plainly needed for BIA-funded schools to help make up the gap between per-pupil expenditures in these schools and in public schools. I urge your support for our recommendation of $119 million for fiscal year 1991 funding.

Mr. Chairman, I also want to urge you to carefully consider our recommendation for funds to meet the health needs of Indian people in your overall appropriation for the Indian Health Service. The committee is requesting an increase of $430 million over the administration's request. This increase is justified, and would accomplish three goals: First, it would restore those services which have been reduced by the Pay Act absorptions; second, it would sustain the same level of care provided in fiscal year 1989, adjusted for inflation; and, third, the increase will move us toward meeting the mandate of Public Law 100-713 to raise the health status of the Indian people of this country.

Diseases long ago thought to be eradicated in the general U.S. population, still plague Indian people in alarming proportions. The age adjusted death rate among American Indian and Alaska Native populations from all forms of tuberculosis exceed that of the United States, all races, by 375 percent. Chronic liver disease and diabetes exceeds that for all other U.S. citizens by 220 percent. We know of no other group of citizens in America that still suffer disease and illness at rates such as these.

On most Indian reservations today, 30 percent of all Indian people live below the poverty level, as compared to 10 percent for all other races in the United States. There are over 60,000 Indian homes which have no water or sanitation facilities, and in some communities, raw sewage is dumped untreated into rivers and lakes that are the only source of drinking water. An appropriation of $125 million for construction of sanitation facilities will meet at least one-sixth of the need which stems from an existing $676 million backlog of unmet needs. It is our responsibility under the Indian Health Care Improvement Act Amendments of 1989 to resolve this and many other health problems over the course of the next 10 years.

For myself and Senator Inouye, I thank you for your continued concern and support, and look forward to working with you as we try to meet the needs of our Indian and native citizens.

Senator McCAIN. Thank you, Mr. Chairman. I am here today on behalf of the distinguished chairman of the Select Committee on Indian Affairs, Senator Inouye, and myself.

The concern that brings me here is the declining level of appropriations for programs that affect America's most needy citizens, native Americans.

Mr. Chairman, Senator Inouye and I undertook a study that was prepared by the Congressional Research Service and the results are shocking. Indian programs have all suffered much deeper cuts than comparable Federal programs for non-Indians.

And, this has occurred despite evidence that Indian people have the worst health, education, and housing status of any group of Americans and despite the fact that the United States has an abiding trust responsibility to native Americans.

The first area of concern, Mr. Chairman, is that the Select Committee on Indian Affairs is recommending an increase of $221 million over the administration's request for the BIA. I have no particular brief with the BIA, Mr. Chairman. It is not an efficient organization, but right now it is the only agency that we could provide funding to in order to get these programs better funded.

Of particular importance is Indian education. I think it's significant to note that stated in constant dollars the spending on BIA education has fallen by 4 percent per year from 1975 through 1991, and at the same time the Indian population has grown dramatically.

I would like you to consider our recommendation to meet the health needs of Indian people. We are requesting an increase of $430 million over the administration request.

Mr. Chairman, diseases long ago thought to be eradicated in the general U.S. population still plague the Indian people in alarming proportions. And, I won't bother you with the details.

Fetal alcohol syndrome, 10 times the national average; a syphilis rate 5 times the national average; chronic liver disease and diabetes 10 times the national average. The list goes on and on and on.

On most Indian reservations today, 30 percent of all Indian people live below the poverty line. That compares with 10 percent for all other races in the United States.

There are over 60,000 Indian homes which have no water or sanitation facilities and in some communities raw sewage is dumped untreated into rivers and lakes that are their only sources of drinking water.

Finally, but certainly not least, Mr. Chairman, we have a serious and ongoing problem with family neglect, child abuse, and child sexual abuse. Just last week, there was another incident of a teacher in an Indian school molesting 25 young girls, Indian girls, between the ages of 5 and 9. It has been going on for at least 1½ years.

And, we need funds to address this issue. We need them very badly.

The incidence of neglect and abuse on Indian reservations and amongst Indian people is higher than in other populations because of the problems that are associated with alcohol abuse and other problems that have led to the breakdown of the family unit.

Mr. Chairman, finally I would appreciate your consideration. I believe that it's time that the Congress and the American people recognized our trust responsibility to native Americans.

They are our first citizens. And, unfortunately, as far as any budgetary measures, along with many others of concern, they seem to be constantly last.

I know that I speak for Senator Inouye and many others when I say that we need to rectify that situation. Thank you, Mr. Chairman.

Chairman **Byrd**. Thank you, Senator McCain. Your statement will be included in the record.

I know of the long interest of Senator Inouye, to whom you have referred, and on whose behalf you are also appearing here today, he being the chairman of the Select Committee on Indian Affairs. I congratulate you both.

Your statement will be of great interest and assistance to the subcommittee as it proceeds to mark up the bill although our funds are very limited, as we all know, and not nearly enough to meet all of the demands and the needs.

But, we are very happy to have your statement.

Senator Reid?

Senator **Reid**. No, Mr. Chairman.

Chairman **Byrd**. Senator Domenici?

Senator **Domenici**. Mr. Chairman, in addition to thanking the Senator, might I just ask one question regarding law enforcement that was not included in the Senator's statement?

Let me preface my remarks by saying that I am aware of the significant needs that you have described. I note one other as I mingle and travel among the Indians in New Mexico.

We have many distinct Indian groups in our State, as you know, Senator. They are called Pueblo Indians, but we have 17 such groups. And, one of the biggest problems is law enforcement.

Without taking a lot of our time, would you concur that there appears to be a very significant shortage of BIA-funded law enforcement people for the coverage of the Indian reservations, Pueblos and reserves?

Senator McCAIN. I would certainly agree with that. And, could I also add, I think that the problem has been exacerbated dramatically by a recent Supreme Court decision that not only precludes tribes from administering justice to non-Indians on Indian reservations, but it has also been now dramatically exaggerated because now they do not have jurisdiction over other tribal members that happen to reside on those reservations which is going to require, I think, increased funding for law enforcement.

Senator DOMENICI. I thank the Senator. And, might I ask a followup question, Mr. Chairman? As I recall, we had the Assistant Secretary of the Interior for Indian Affairs before the subcommittee.

I asked him for a report on Indian law enforcement. My recollection is that he was asked specifically to look at the entire country.

Does the chairman know whether such a report has been received by our subcommittee?

Chairman BYRD. It, fortuitously, arrived just this morning. [Laughter.]

Senator DOMENICI. I thank the Chair. We will look at it with interest.

Chairman BYRD. I thank the Senator and the subcommittee thanks you. Thank you, Senator Domenici.

Senator McCAIN. Thank you, Mr. Chairman.

STATEMENT OF HON. PETE WILSON, U.S. SENATOR FROM CALIFORNIA

Chairman BYRD. The next Member of the Senate who will testify will be Senator Pete Wilson. Senator Wilson, we are happy to have you appear before the subcommittee.

Senator WILSON. Thank you very much, Mr. Chairman. I am very grateful for the opportunity to appear.

Before I begin, I should congratulate one of your Members, Senator Reid, on his effort to bring water to a wildlife area in Nevada. It made big news in the Sacramento newspapers. It was a nice picture of you there.

Mr. Chairman, I am very grateful for the opportunity to testify on behalf of California's parklands, forests and wildlife habitat. I have several appropriation requests that I wish to bring to the subcommittee's attention.

But, in the interest of your time, I will do so by a written communication. And, at the outset, I will state that I intend to address my remarks here today primarily on the subject of protection of the desert, the California desert, which not only provides an enormous recreational resource to the people of my State but is truly a national recreational treasury.

At the outset, let me applaud the administration's $250 million request for the Land and Water Conservation Fund Program. This marks nearly a $50 million increase beyond the amount budgeted last year for this program.

In the 25th anniversary of the Land and Water Conservation Program, it clearly represents an increased awareness of, and appreciation for, the environment at the Federal level.

Because the subcommittee has a number of witnesses scheduled, I will, as I indicated, limit my comments to the critical need for funding for the protection of the California desert area.

As I have observed before to the members of this committee, the California desert is a special place. It holds the imagination not of just Californians but of the Nation as a whole.

There is a special solitude about the desert. Its landscape and many natural qualities are a truly national treasure but they, for that reason and because of their fragility, do require protection.

Mr. Chairman, I'm sure that you and the members are aware of the Desert Protection Act introduced by my colleague, Senator Cranston. And, some of you may support the measure; others may oppose it. But, one thing I think that all can agree upon is that there is an initiative required that will preserve unique resources of this fragile environment which are, in fact, threatened.

What the California desert most urgently needs is a level of funding that will allow the Bureau of Land Management to properly manage and effectively patrol this area which is a fragile ecosystem. It is an unfortunate truth that there will always be some irresponsible people among the otherwise responsible majority of off-road vehicle users, hunters, and campers, just as in any other group. There will be a few who disregard the rules and threaten the precious ecosystems at the expense of the responsible members.

A way must be discovered to permit all Californians and, indeed, all visitors to the desert to enjoy and appreciate this unique ecosystem while at the same time ensuring that negligent or willful misuse of the desert does not abuse or destroy those treasures that we hope can exist for generations.

In its report last June on the California Desert Conservation Area, the General Accounting Office listed a budget shortfall as primary reason for the BLM's inability to meet the wildlife protection objectives of the land use plan for the desert.

A budget increase for BLM desert activities, including additional rangers, would help the BLM greatly to meet the wildlife goals of the California Desert Conservation Area Plan as well as to patrol and protect the desert from unauthorized uses.

Current funding for the BLM management of the California desert is about $13 million. I am informed that in order to fulfill the promise of the CDCA Plan, the Bureau's budget requires an additional $10 million in fiscal year 1991.

This does not include the Land and Water Conservation Fund requests in the President's budget.

Part of this money would be used to expand the BLM's ranger staff by 10 rangers. More than 3 million people each year visit the California desert.

And, yet, the BLM currently only has 44 rangers to patrol the 12 million acres of land within its jurisdiction, an area which is roughly comparable in size to the State of Ohio.

The BLM must have the financial resources it needs if it is to properly manage this large and beautiful expanse. So, I urge the subcommittee to appropriate additional funds to support BLM activities in and for the California desert.

Land acquisition in the desert is also an important part of the desert management plan. So, I strongly support a $300,000 appropriation for the East Mojave Scenic Area that would be used to acquire parcels noted for their recreational value and for a variety of plant and animal species that require efforts at preservation.

In addition, the rapid population growth in the Coachella Valley and in the Palm Springs area presents many challenging land use decisions in the desert. For instance, residential development has spread to the base of the Santa Rosa Mountains and there are plans to extend this development within the range.

These mountains serve as critical habitat for big horn sheep; $1½ million is requested to protect this area from further infringement.

And, I would also support a BLM request of $900,000 to restore Kelso Depot in the East Mojave Scenic Area. This is an attraction which is an important link to our historic desert past.

It once operated as a passenger and crew depot for Union Pacific Railroad crews and is considered a prime candidate for listing on the National Register of Historic Places.

I know that you are also well aware of the recent Fish and Wildlife Service listing of the Mojave population of the desert tortoise as a threatened species. The desert tortoise is thought by many to be an important indicator species for the highly fragile California desert ecosystem.

I, therefore, support a BLM appropriation of $300,000 for land acquisition at the Desert Tortoise Natural Area, an additional $500,000 for another threatened species, and $700,000 for the Chuckwalla Bench Area of critical environmental concern.

An additional $1.04 million should be earmarked for desert tortoise conservation programs that would include the controls of predatory ravens, protective fencing and habitat rehabilitation.

There are two nondesert BLM projects that I think deserve the subcommittee's attention this year, and they are the Carrizo Plain and the Upper Sacramento River. But, I have set forth at greater length in my statement the justification for those requests and will not take the time of the subcommittee at this point to recite what is before you.

PREPARED STATEMENT

And, Mr. Chairman, I thank you and the members for your attention and for the opportunity to appear before you. I would be happy to respond to any questions that you may have.

[The statement follows:]

STATEMENT OF SENATOR PETE WILSON

MR. CHAIRMAN, I APPRECIATE THIS OPPORTUNITY TO TESTIFY ON BEHALF OF CALIFORNIA'S PARKLANDS, FORESTS AND WILDLIFE HABITAT. I HAVE SEVERAL APPROPRIATION REQUESTS THAT I WISH TO BRING TO THE SUBCOMMITTEE'S ATTENTION.

AT THE OUTSET, LET ME APPLAUD THE ADMINISTRATION'S $250 MILLION REQUEST FOR THE LAND AND WATER CONSERVATION FUND (LWCF) PROGRAM. THIS MARKS NEARLY A $50 MILLION INCREASE BEYOND THE AMOUNT BUDGETED LAST YEAR FOR THIS PROGRAM.

IN THE 25TH ANNIVERSARY OF THE LWCF PROGRAM, IT CLEARLY REPRESENTS AN INCREASED AWARENESS OF -- AND APPRECIATION FOR -- THE ENVIRONMENT AT THE FEDERAL LEVEL.

BECAUSE THE SUBCOMMITTEE HAS A NUMBER OF WITNESSES SCHEDULED TO TESTIFY TODAY, I WILL LIMIT MY COMMENTS TO THE CRITICAL NEED FOR DESERT FUNDING.

AS I HAVE SAID BEFORE, THE CALIFORNIA DESERT IS A SPECIAL PLACE. IT HOLDS THE IMAGINATION OF NOT JUST CALIFORNIANS, BUT OF THE NATION AS A WHOLE. THERE IS A SPECIAL SOLITUDE ABOUT THE DESERT. ITS LANDSCAPE AND MANY NATURAL QUALITIES DEMAND PROTECTION.

MR. CHAIRMAN, YOU ARE BY NOW WELL AWARE OF THE DESERT PROTECTION ACT, AS INTRODUCED BY MY COLLEAGUE FROM CALIFORNIA, SENATOR CRANSTON. WHETHER YOU SUPPORT S. 11 OR OPPOSE IT, ALL OF US CAN AGREE THAT A DESERT INITIATIVE IS IMPORTANT TO PRESERVE THE UNIQUE RESOURCES OF THIS FRAGILE ENVIRONMENT.

WHAT THE CALIFORNIA DESERT MOST URGENTLY NEEDS IS A LEVEL OF FUNDING THAT WILL ALLOW THE BUREAU OF LAND MANAGEMENT (BLM) TO PROPERLY MANAGE AND EFFECTIVELY PATROL THIS FRAGILE ECOSYSTEM.

IT IS AN UNFORTUNATE TRUTH THAT THERE WILL ALWAYS BE SOME IRRESPONSIBLE PEOPLE AMONG OFF-ROAD VEHICLE USERS, HUNTERS AND CAMPERS, JUST AS AMONG ANY OTHER GROUP, THAT WILL DISREGARD THE PRECIOUS ECOSYSTEMS OF THE DESERT.

A WAY MUST BE DISCOVERED TO PERMIT ALL CALIFORNIANS TO ENJOY AND APPRECIATE THIS UNIQUE ECOSYSTEM, WHILE AT THE SAME TIME ENSURING THAT NEGLIGENT OR WILLFUL MISUSE OF THE DESERT DOES NOT ABUSE OR DESTROY IT.

IN ITS REPORT LAST JUNE ON THE CALIFORNIA DESERT CONSERVATION AREA (CDCA), THE GENERAL ACCOUNTING OFFICE SITED A BUDGET SHORTFALL AS A PRIMARY REASON FOR THE BLM'S INABILITY TO MEET THE WILDLIFE PROTECTION OBJECTIVES OF THE LAND USE PLAN FOR THE DESERT.

A BUDGET INCREASE FOR BLM DESERT ACTIVITIES, INCLUDING ADDITIONAL RANGERS, WOULD HELP THE BLM TO MEET THE WILDLIFE GOALS OF THE CDCA PLAN AS WELL AS PATROL AND PROTECT THE DESERT FROM UNAUTHORIZED USES.

CURRENT FUNDING FOR BLM MANAGEMENT OF THE CALIFORNIA DESERT IS ABOUT $13 MILLION. I AM INFORMED THAT IN ORDER TO FULFILL THE PROMISE OF THE CDCA PLAN, THE BLM BUDGET REQUIRES AN ADDITIONAL $10 MILLION IN FY 1991. THIS DOES NOT INCLUDE THE LAND AND WATER CONSERVATION FUND REQUESTS IN THE PRESIDENT'S BUDGET.

PART OF THIS MONEY WOULD BE USED TO EXPAND THE BLM'S RANGER STAFF BY TEN RANGERS. MORE THAN THREE MILLION PEOPLE EACH YEAR VISIT THE CALIFORNIA DESERT. YET, THE BLM CURRENTLY ONLY HAS 44 RANGERS TO PATROL THE TWELVE MILLION ACRES OF LAND WITHIN ITS JURISDICTION, AN AREA ROUGHLY THE SIZE OF OHIO.

THE BLM MUST HAVE THE FINANCIAL RESOURCES IT NEEDS TO PROPERLY MANAGE THIS LARGE AND BEAUTIFUL EXPANSE. I URGE THE SUBCOMMITTEE TO APPROPRIATE ADDITIONAL FUNDS TO SUPPORT BLM ACTIVITIES IN THE CALIFORNIA DESERT.

LAND ACQUISITION IN THE DESERT IS ALSO AN IMPORTANT PART OF THE DESERT MANAGEMENT PLAN. I STRONGLY SUPPORT A $300,000 APPROPRIATION FOR THE EAST MOJAVE SCENIC AREA THAT WOULD BE USED TO ACQUIRE PARCELS NOTED FOR THEIR RECREATIONAL VALUE, AND FOR A VARIETY OF PLANT AND ANIMAL SPECIES.

IN ADDITION, RAPID POPULATION GROWTH IN THE COACHELLA VALLEY/PALM SPRINGS AREA PRESENTS MANY CHALLENGING LAND USE DECISIONS IN THE DESERT. FOR INSTANCE, RESIDENTIAL DEVELOPMENT HAS SPREAD TO THE BASE OF THE SANTA ROSA MOUNTAINS, AND THERE ARE PLANS TO EXTEND THIS DEVELOPMENT WITHIN THE RANGE.

THESE MOUNTAINS SERVE AS CRITICAL HABITAT FOR BIG HORN SHEEP. $1.5 MILLION IS REQUESTED TO PROTECT THIS AREA FROM FURTHER INFRINGEMENT.

I ALSO SUPPORT A BLM REQUEST OF $900,000 TO RESTORE KELSO DEPOT IN THE EAST MOJAVE SCENIC AREA. THIS ATTRACTION IS AN

IMPORTANT LINK TO OUR HISTORIC DESERT PAST. IT ONCE OPERATED AS A PASSENGER AND CREW DEPOT FOR UNION PACIFIC RAILROAD, AND IS CONSIDERED A PRIME CANDIDATE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES.

YOU ARE ALSO WELL AWARE OF THE RECENT FISH AND WILDLIFE SERVICE LISTING OF THE MOJAVE POPULATION OF THE DESERT TORTOISE AS A THREATENED SPECIES. THE DESERT TORTOISE IS THOUGHT BY MANY TO BE AN IMPORTANT INDICATOR SPECIES FOR THE HIGHLY FRAGILE CALIFORNIA DESERT ECOSYSTEM.

I SUPPORT A BLM APPROPRIATION OF $300,000 FOR LAND ACQUISITION AT THE DESERT TORTOISE NATURAL AREA, $500,000 FOR CATEGORY I TORTOISE HABITAT, AND $700,000 FOR THE CHUCKWALLA BENCH AREA OF CRITICAL ENVIRONMENTAL CONCERN. AN ADDITIONAL $1.04 MILLION SHOULD BE EARMARKED FOR DESERT TORTOISE CONSERVATION PROGRAMS THAT INCLUDE PREDATORY RAVEN CONTROLS, POPULATION STUDIES, PROTECTIVE FENCING AND HABITAT REHABILITATION.

TWO NON-DESERT BLM PROJECTS THAT DESERVE THE SUBCOMMITTEE'S ATTENTION THIS YEAR ARE THE CARRIZO PLAIN AND THE UPPER SACRAMENTO RIVER.

THE SAN JOAQUIN VALLEY IS NOTED PRIMARILY FOR ITS AGRICULTURAL IMPORTANCE TO THE STATE OF CALIFORNIA. BUT THESE ARID LANDS ALSO PROVIDE IMPORTANT HABITAT FOR MANY PLANT AND WILDLIFE SPECIES, INCLUDING SEVERAL ENDANGERED SPECIES. THIS SUBCOMMITTEE HAS TAKEN GREAT INTEREST IN THE HABITAT VALUES AT CARRIZO PLAIN. CONTINUED SUPPORT OF THIS PROJECT AT $5 MILLION WILL HELP TO CREATE A LARGE RESERVE IN THE SOUTHERN PORTION OF THE VALLEY FOR THE PROTECTION OF THESE SPECIES.

THE SACRAMENTO RIVER IS SPECIAL TO CALIFORNIA. IT PROVIDES HABITAT FOR NEARLY 75 PERCENT OF ALL THE SALMON CAUGHT OFF THE CALIFORNIA COAST, AND CONTRIBUTES MORE THAN $100 MILLION IN ECONOMIC BENEFITS TO THE REGION.

UNFORTUNATELY, THE SALMON AND STEELHEAD RUNS ON THE UPPER SACRAMENTO RIVER HAVE SUFFERED A STEADY DECLINE OVER THE LAST FORTY YEARS, SO MUCH SO THAT THE WINTER CHINOOK SALMON HAS BEEN DECLARED A THREATENED SPECIES UNDER THE ENDANGERED SPECIES ACT.

I HAVE INTRODUCED LEGISLATION, BASED ON THE RECOMMENDATIONS OF A COMPREHENSIVE STATE STUDY, TO RESTORE THE SALMON AND STEELHEAD TROUT POPULATIONS OF THE RIVER AND ITS MANY TRIBUTARIES

TO THEIR MAXIMUM, SUSTAINABLE LEVEL. I ALSO EXPECT MY BILL TO PROVIDE FOR VITALLY NEEDED RIPARIAN HABITAT RESTORATION EFFORTS ALONG THE RIVER. ANIMAL AND BIRD SPECIES THAT DEPEND ON THIS AREA INCLUDE THE RIVER OTTER, BEAVER AND BALD EAGLE.

FUNDING FOR THE NUMEROUS PROJECTS ASSOCIATED WITH THE RESTORATION EFFORT ARE TO BE SHARED BY FEDERAL AND STATE GOVERNMENT AS WELL AS WATER USERS. I HOPE THAT THE SUBCOMMITTEE WILL CONTRIBUTE TO THIS IMPORTANT PROJECT THIS YEAR WITH A $1.5 MILLION BLM APPROPRIATION THAT WILL BE USED TO ACQUIRE A 1,150-ACRE PARCEL ALONG THE RIVER.

INCLUDED IN THE UPPER SACRAMENTO RIVER PUZZLE ARE A COUPLE OF IMPORTANT FISH AND WILDLIFE SERVICE PROJECTS.

THE COLEMAN NATIONAL FISH HATCHERY WAS CREATED TO RESPOND TO THE DEVASTATING EFFECT THAT BOTH THE SHASTA AND RED BLUFF DAMS WERE HAVING ON THE SACRAMENTO RIVER FISHERIES. IT IS ONE OF THE MOST IMPORTANT FISH HUSBANDRY OPERATIONS IN NORTH AMERICA. FOR THE FIRST TIME, THE FEDERAL BUDGET INCLUDES FUNDS TO INITIATE DESPERATELY NEEDED REHABILITATION OF THE COLEMAN HATCHERY. I COMMEND THE PRESIDENT FOR MAKING THIS A BUDGET PRIORITY. HOWEVER, I ASK YOU TO CONSIDER THE CALIFORNIA WATER COMMISSION'S REQUEST FOR AN ADDITIONAL $3.8 MILLION TO FULLY UPGRADE THE FACILITY.

THE SACRAMENTO RIVER NATIONAL WILDLIFE REFUGE ALSO MERITS PARTICULAR ATTENTION. THE ECOSYSTEM ALONG A 100-MILE STRETCH OF THE SACRAMENTO RIVER BETWEEN RED BLUFF AND COLUSA HAS BEEN THREATENED BY WATER DEVELOPMENT, BANK STABILIZATION, AGRICULTURE AND URBAN GROWTH. AS A RESULT, THE RIPARIAN FOREST ALONG THIS PORTION OF THE RIVER HAS SUFFERED GREATER DESTRUCTION THAN ANY OTHER FORM OF WILDLIFE HABITAT IN CALIFORNIA -- LESS THAN TWO PERCENT OF THE ORIGINAL HABITAT FOR MIGRATORY WATERFOWL AND SEVERAL ENDANGERED, THREATENED AND CANDIDATE SPECIES REMAINS. THE REFUGE DESERVES A $5 MILLION APPROPRIATION IN FY 1991 TO ACQUIRE PARROTT RANCH AND OTHER LANDS ESSENTIAL TO THE PRESERVATION OF THE RIVER'S DIVERSE WILDLIFE.

PRESERVING OPEN SPACE IN RAPIDLY GROWING AREAS IS AN ESSENTIAL ELEMENT OF COMPREHENSIVE ENVIRONMENTAL PROTECTION. I AM COMMITTED TO THE ESTABLISHMENT OF PARKS WITHIN AND SURROUNDING URBAN SETTINGS.

FOR INSTANCE, TREMENDOUS URBAN GROWTH IN THE SAN FRANCISCO BAY AREA HAS SLOWLY DESTROYED MUCH OF THE WILDLIFE HABITAT. LAND

ACQUISITION FUNDS ARE NECESSARY TO ENSURE THAT CRITICAL WETLAND HABITAT IN THE BAY AREA RECEIVES CONTINUED PROTECTION. I AM AWARE OF THREE NATIONAL WILDLIFE REFUGES IN THAT REGION THAT NEED THE SUBCOMMITTEE'S SUPPORT THIS YEAR.

IN 1988, I HELPED TO ENACT LEGISLATION TO NEARLY DOUBLE THE SIZE OF THE EXISTING 22,000-ACRE SAN FRANCISCO BAY AREA NATIONAL WILDLIFE REFUGE. THE REFUGE IS HOME TO FOUR ENDANGERED SPECIES AND A NUMBER OF OTHER WILDLIFE SPECIES. IT DESERVES $4 MILLION FOR LAND ACQUISITION IN FY 1991 TO FULFILL THE INTENT OF THE LEGISLATION.

THE SAN PABLO BAY NATIONAL WILDLIFE REFUGE IS ANOTHER PRIORITY ACQUISITION IN THE BAY AREA. THE FISH AND WILDLIFE SERVICE CONSIDERS THIS REFUGE PROJECT AS THE LARGEST WETLAND HABITAT RESTORATION EFFORT IN THE WEST. IN RECOGNITION OF THIS EFFORT, $3 MILLION WAS EARMARKED FOR THIS PROJECT LAST YEAR. AN ADDITIONAL $3.7 MILLION IS NEEDED THIS YEAR TO COMPLETE THE WETLAND RESTORATION MISSION THAT THE FISH AND WILDLIFE SERVICE HAS IN STORE FOR SAN PABLO BAY.

THE CALIFORNIA STATE COASTAL CONSERVANCY HAS PROPOSED THE CREATION OF THE MARIN ISLANDS NATIONAL WILDLIFE REFUGE IN THE SAN FRANCISCO BAY. THE TWO ISLANDS AND THE 325 ACRES OF SUBMERGED TIDELANDS SURROUNDING THEM ARE IMPORTANT TO WILDLIFE HABITAT, PARTICULARLY TO BIRD POPULATIONS SUCH AS THE HERON AND EGRET. HALF OF THE ACQUISITION WOULD BE FUNDED THROUGH PRIVATE DONATIONS, WITH ANOTHER THIRD CONTRIBUTED EACH BY STATE, FEDERAL, AND LOCAL AGENCIES. I REQUEST A $600,000 APPROPRIATION TO PROVIDE FOR THE FEDERAL SHARE OF THIS PROJECT.

TWO ENDANGERED SPECIES, THE STEPHENS' KANGAROO RAT AND THE LEAST BELL'S VIREO, ARE ALSO CRITICAL WILDLIFE CONCERNS.

ECONOMIC DEVELOPMENT WITHIN RIVERSIDE COUNTY HAS SLOWED CONSIDERABLY SINCE THE LISTING OF THE KANGAROO RAT. THIS CONDITION WILL REMAIN UNTIL A HABITAT PROTECTION PLAN IS ESTABLISHED TO ENSURE THAT THE ANIMAL'S HABITAT IS NOT AFFECTED BY DEVELOPMENT WITHIN THE COUNTY. $700,000 WILL PROVIDE FOR THE CREATION OF A MULTIPLE SPECIES HABITAT PRESERVATION PLAN TO PROVIDE PROTECTION FOR THE STEPHENS' KANGAROO RAT AND 36 OTHER SPECIES OF CONCERN.

LIKEWISE, I SUPPORT FUNDING FOR THE LEAST BELL'S VIREO HABITAT CONSERVATION PLANS IN SAN DIEGO COUNTY. THE SAN DIEGO ASSOCIATION OF GOVERNMENTS REQUESTS $182,000 TO IMPLEMENT THE

PLANS THAT HAVE ALREADY BEEN DRAFTED FOR SOUTHERN CALIFORNIA RIVERS USED BY THIS MIGRATORY SONGBIRD.

WHEN IT COMES TO LAND ACQUISITION NEEDS IN OUR NATIONAL PARKS, I CAN THINK OF FEW AS IMPORTANT OR ENDANGERED AS THE SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA (SMMNRA). WHILE THIS PROJECT DID VERY WELL BY THIS COMMITTEE LAST YEAR, MUCH FUNDING REMAINS TO BE APPROPRIATED. THERE ARE LITERALLY THOUSANDS OF UNDEVELOPED ACRES, INCLUDING PORTIONS OF CANYONS, WILDLIFE CORRIDORS AND TRAILS PROVIDING COASTAL ACCESS, THAT COULD BE PURCHASED WITH SIGNIFICANT HELP FROM THE FEDERAL GOVERNMENT.

FEDERAL BUDGET CONSTRAINTS HAVE LED TO ACQUISITION DELAYS AND HAVE ESCALATED THE PURCHASE COSTS OF MANY KEY PROPERTIES. WE NEED TO MAKE FUNDS AVAILABLE NOW BEFORE THE COSTS OF SOME OF THESE PROPERTIES BECOME PROHIBITIVE.

WHILE I AM PLEASED THAT THE ADMINISTRATION'S BUDGET INCLUDES $12 MILLION FOR THE SANTA MONICAS, I AM AWARE THAT $30 MILLION COULD BE SPENT PROFITABLY FOR LAND ACQUISITION IN THE SMMNRA. I EMPHASIZE THE NEED FOR ABOVE BUDGET ALLOWANCES FOR THIS EXCEPTIONAL PARK.

I AM AWARE OF SEVERAL OTHER PARKLAND PROJECTS NEEDING FEDERAL FUNDING THIS YEAR. THIS LIST INCLUDES THE PURCHASE OF PROPERTY ON SANTA CRUZ ISLAND IN THE CHANNEL ISLANDS NATIONAL PARK.

MR. CHAIRMAN, I AM DEEPLY GRATIFIED BY YOUR RECENT SUPPORT OF THE NATIONAL PARK SERVICE REQUEST TO REPROGRAM FUNDS TO ACQUIRE A ONE QUARTER, UNDIVIDED INTEREST IN THE GHERINI RANCH. I NOW ASK THE SUBCOMMITTEE TO SUPPORT THE ADMINISTRATION'S BUDGET REQUEST OF $14.5 MILLION TO ACQUIRE THE REMAINING GHERINI PROPERTIES AND COMPLETE FEDERAL PROTECTION OF THIS UNIQUE PARK.

IN ADDITION, I AM INFORMED THAT $7 MILLION IS NEEDED FOR LAND ACQUISITION IN THE GOLDEN GATE NATIONAL RECREATION AREA (GGNRA). THE PARK SERVICE HAS IDENTIFIED SEVERAL HIGH PRIORITY PROJECTS, INCLUDING THE GIACOMINI RANCH, WHICH ALREADY HAS BEEN BROUGHT TO THE SUBCOMMITTEE'S ATTENTION. THE GGNRA IS ONE OF THE MOST POPULAR PARK UNITS IN THE ENTIRE PARK SYSTEM, AND ACCORDINGLY DESERVES A HIGH BUDGET PRIORITY.

ANOTHER BAY AREA PROJECT THAT AGAIN DESERVES THE COMMITTEE'S ATTENTION THIS YEAR IS THE JOHN MUIR NATIONAL HISTORIC SITE. $1.75 MILLION IS NEEDED TO COMPLETE THIS PROJECT AND PRESERVE AN AREA THAT ONCE SERVED AS THE ORIGINAL MUIR FARM. THIS PROJECT

WOULD ALSO PROVIDE AN IMPORTANT LINK TO THE SAN FRANCISCO BAY AREA RIDGE TRAIL.

THE BAY AREA RIDGE TRAIL PROJECT IS DESIGNED TO CREATE A 350-MILE TRAIL ALONG THE RIDGE OF THE HILLS AND MOUNTAINS OF THE NINE COUNTIES SURROUNDING THE SAN FRANCISCO BAY. IT OFFERS AN IMPORTANT RECREATIONAL RESOURCE, FILLED WITH PANORAMIC VIEWS AND OTHER OUTDOOR ACTIVITIES, FOR THE CITY OF SAN FRANCISCO AND NEIGHBORING COMMUNITIES.

WHEN COMPLETED, IT WILL CONNECT OVER 75 BAY AREA PARKS, MANAGED BY FORTY DIFFERENT AGENCIES AND NON-PROFIT ORGANIZATIONS. I REQUEST A $175,000 APPROPRIATION TO SUPPORT PROJECT COORDINATION AND PUBLIC EDUCATION ACTIVITIES ASSOCIATED WITH THIS URBAN TRAILS PROJECT.

MY FINAL TWO PARK SERVICE REQUESTS ARE DESIGNED TO EDUCATE INDIVIDUALS ABOUT TWO DIFFERENT, YET SIGNIFICANT, COMPONENTS OF OUR NATIONAL PARK SYSTEM.

DEATH VALLEY NATIONAL MONUMENT IS AN IMPORTANT CALIFORNIA TOURIST ATTRACTION. HOWEVER, ITS MUSEUM AND VISITOR CENTER ARE INADEQUATE IN BOTH SPACE AND EQUIPMENT TO PROVIDE THE KIND OF SERVICES THAT ARE NEEDED TO EDUCATE THE VISITING PUBLIC OF DEATH VALLEY'S MANY OUTSTANDING FEATURES. I REQUEST AN APPROPRIATION OF $4.25 MILLION TO EXPAND AND MODERNIZE THESE FACILITIES.

SIMILARLY, LASSEN VOLCANIC NATIONAL PARK ALSO NEEDS ADEQUATE VISITOR FACILITIES. THIS IS ESSENTIAL TO THE ECONOMIC VIABILITY OF MANY DEPRESSED RURAL COMMUNITIES IN NORTHERN CALIFORNIA. RECOGNIZING THIS NEED, THE NATIONAL PARK SERVICE LISTS A VISITOR CENTER AS THE NUMBER ONE PRIORITY FOR THE LASSEN PARK.

THE PARK AND THE LASSEN NATIONAL FOREST PRESENT MANY INCREDIBLE SCENIC, GEOLOGIC AND OTHER NATURAL RESOURCES, INCLUDING FIVE OF THE WORLD'S SIX VOLCANIC FORMS. I ASK THE SUBCOMMITTEE TO CONSIDER A $2.5 MILLION APPROPRIATION IN FY 1991 FOR A LASSEN VISITOR CENTER.

THERE ARE ALSO SEVERAL FOREST SERVICE LAND ACQUISITION NEEDS. A $5.13 MILLION APPROPRIATION IS NECESSARY TO ACQUIRE THE CASTLE PEAK PROPERTY ALONG THE 2,620-MILE COURSE OF THE PACIFIC CREST SCENIC TRAIL. THIS TRAIL EXTENDS FROM THE MEXICAN BORDER TO THE CANADIAN BORDER, WINDING ITS WAY THROUGH CALIFORNIA, OREGON AND WASHINGTON.

THE TAHOE NATIONAL FOREST'S SENSITIVE CASTLE PEAK AREA IS THREATENED BY LOGGING INTERESTS. THE AREA PROVIDES EXCELLENT RECREATIONAL ACTIVITIES SUCH AS HIKING, SKIING AND FISHING. IT ALSO SERVES AS HABITAT FOR BLACK BEAR, GOLDEN BEAVER, BOBCAT, RED FOX, PINE MARTEN AND BIRD POPULATIONS, INCLUDING THE ENDANGERED BALD EAGLE AND PEREGRINE FALCON.

ANOTHER FOREST SERVICE PROJECT THAT THE SUBCOMMITTEE HAS SUPPORTED IN THE PAST IS HOPE VALLEY IN THE TOIYABE NATIONAL FOREST. FEDERAL FUNDS HAVE ALLOWED THE FOREST SERVICE TO ACQUIRE 11,000 ACRES OF THE 25,000-ACRE TOTAL FOR THE HOPE VALLEY PRESERVATION PROGRAM. $7 MILLION IS NEEDED IN FY 1991 TO SECURE ANOTHER 6,380 ACRES IN THE VALLEY AND PRESERVE THIS POPULAR RECREATIONAL AREA FROM THE KIND OF DEVELOPMENT THAT HAS OCCURRED IN NEARBY SOUTH LAKE TAHOE.

I ALSO CONSIDER AN AREA KNOWN AS GROUSE LAKES IN THE TAHOE NATIONAL FOREST A TOP LAND ACQUISITION PRIORITY. WITH ITS MANY BEAUTIFUL LAKES AND SPECTACULAR PANORAMIC VIEWS, THIS AREA OFFERS SOME OF THE MOST DIVERSE RECREATIONAL OPPORTUNITIES IN THE STATE. ACQUISITION OF THE PRIVATE INHOLDINGS IN THE GROUSE LAKES REGION WILL REQUIRE AN APPROPRIATION OF $6.4 MILLION IN FY 1991.

THE 74-ACRE TALLAC HISTORIC SITE ON THE SHORE OF LAKE TAHOE IS AN EXCITING EDUCATIONAL AND CULTURAL FACILITY. THE SITE, WHICH IS INCLUDED ON THE NATIONAL REGISTER OF HISTORIC SITES, IS COMPRISED OF 19 BUILDINGS, INCLUDING THREE HISTORIC ESTATES. ITS CULTURAL ARTS PROGRAMS, BIKE PATHS, CONCERTS AND EXHIBITS ATTRACT OVER 200,000 VISITORS EACH SUMMER.

THROUGH THE JOINT EFFORTS OF THE TAHOE TALLAC ASSOCIATION AND THE FOREST SERVICE, A MAJOR REHABILITATION EFFORT OF THE SITE IS CURRENTLY UNDERWAY. A $1 MILLION APPROPRIATION IN FY 1991 IS REQUIRED TO REHABILITATE THE THREE HISTORIC ESTATES, ALLOWING CONVERSION OF AN OLD BOATHOUSE TO A YEAR-ROUND THEATER, CREATION OF A NAUTICAL MUSEUM, AND THE RESTORATION OF THE PERFORMING ARTS CENTER.

THE REGIONAL LEARNING CENTER IN SONORA, CALIFORNIA IS A SPECIAL PLACE. ITS ENVIRONMENTAL SETTING IN THE STANISLAUS NATIONAL FOREST OFFERS VISITING STUDENTS SOME INTERESTING EDUCATIONAL OPPORTUNITIES THAT CANNOT BE MATCHED IN THE CLASSROOM. MANY CALIFORNIA SCHOOLS DEPEND ON THE FACILITY TO COMPLEMENT THEIR GEOLOGY, BOTANY, ECOLOGY, AND HISTORY CURRICULUMS.

I AM AWARE THAT THE FOREST SERVICE AND THE CURRENT LESSEE, CLOVIS UNIFIED SCHOOL DISTRICT, ARE NOT FINANCIALLY EQUIPPED TO MEET THE GENERAL MAINTENANCE NEEDS OF THE CENTER IN THE NEAR FUTURE. A ONE-TIME FOREST SERVICE APPROPRIATION OF $1.05 MILLION IN FY 1991 WILL PROVIDE FOR LONG-TERM MAINTENANCE, CONTINUED USE AND ENJOYMENT OF THIS EDUCATIONAL FACILITY.

THE PROJECTS THAT I HAVE MENTIONED HERE TODAY ARE DESIGNED TO ILLUSTRATE THE MANY LAND PRESERVATION NEEDS OF CALIFORNIA. THERE ARE A NUMBER OF OTHER OUTSTANDING PROJECTS THAT THE SUBCOMMITTEE WILL HEAR ABOUT THAT ARE EQUALLY DESERVING OF THE SUBCOMMITTEE'S ATTENTION. I TRUST THE SUBCOMMITTEE WILL PAY CLOSE ATTENTION TO THESE REQUESTS AS WELL.

TURNING TO THE FOREST SERVICE'S TIMBER SALE MANAGEMENT PROGRAM, I REGISTER MY SUPPORT FOR THE ADMINISTRATION'S TIMBER SALE PROGRAM AND A COMMENSURATE ROADS BUDGET. A NATIONWIDE SALE PROGRAM OF 11 BILLION BOARD FEET OF TIMBER WILL ALLOW A SALE PROGRAM OF UP TO 1.8 BILLION BOARD FEET IN CALIFORNIA.

I APPRECIATE THE SUBCOMMITTEE'S WILLINGNESS TO CONSIDER EACH OF THESE REQUESTS. AS ALWAYS, I LOOK FORWARD TO WORKING WITH THE SUBCOMMITTEE TO MOVE THIS YEAR'S BILL THROUGH CONGRESS IN A TIMELY FASHION.

Chairman BYRD. The subcommittee thanks you for your appearance before the subcommittee and for your statement.

Without objection, your statement is included in the record.

Senator WILSON. Thank you, sir.

Chairman BYRD. It will be helpful to the subcommittee as we proceed to mark up our bill. You may be assured that your request will receive the subcommittee's attention.

Senator Reid?

OPENING REMARKS OF SENATOR REID

Senator REID. Thank you, Mr. Chairman. While both California Senators are here, I appreciate your recognizing the water that was put into Stillwater National Wildlife Refuge on Saturday last. That was the indirect result, of course, of the activities of this subcommittee which appropriated several millions of dollars for purchasing fresh water.

Also, you know, we are sister States. We both have the same problems. And, we need some help from the House side on some of the California projects.

There is Hope Valley, which is a very important part of the Lake Tahoe Basin. Those options are going to expire this year unless we get money for that. There are still about $7 million left.

There is a very important historical site that people in California and Nevada have been trying to get for years. The name of it is

Tallac. It's an historical site right over the border. It's going to deteriorate if we don't do something to restore it soon.

There are all kinds of environmentally sensitive land around the lake. Kelso is just a short ways from where I was born and raised. I mean really short, just a few miles.

Without going into more detail, we in the Senate have done more than our share. The Santa Monica Mountains, for example, I know are important to members from California.

But, I guess what I'm saying is with that very, very large California delegation, it would sure be a lot easier for the Senate if a lot of those things were in the bill when we got it rather than our having to try to put something in that really isn't a direct concern of Nevada. We could protect the California projects.

So, if you could get the very large California delegation interested in Hope Valley and some of those other things, it would make our job over here easier.

Senator WILSON. I think the Senator makes a very good point.

Chairman BYRD. Senator McClure?

Senator MCCLURE. I have no questions. I just want to note that we have your correspondence with respect to some other items you did not cover. They will also receive our attention as we go to mark up.

Thank you very much for keeping us informed.

Senator WILSON. Thank you very much, Senator.

Chairman BYRD. Senator Domenici?

Senator DOMENICI. I have no questions. Thank you, Mr. Chairman.

Chairman BYRD. Thank you, Senator Wilson.

Senator WILSON. Thank you very much, Mr. Chairman.

STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

Chairman BYRD. The next witness is Senator Alan Cranston from California, the majority whip.

Senator Cranston, we are happy to have your appearance before the subcommittee today. You may present your statement in its entirety or you may summarize it, in which case, it will be included in the record.

Senator CRANSTON. I will summarize it. And, I deeply appreciate the opportunity to appear.

Chairman BYRD. Without objection then, the statement will be included in the record in its entirety.

Senator CRANSTON. Thank you very much. I appear to support funding for the Santa Monica Mountains National Recreation Area.

Let me say to Senator Reid that I have supported and expressed such support for Hope Valley and for the other matters you mentioned, and we will do our best to encourage the House to do some of the work on those matters.

The Santa Monica Mountains National Recreation Area is a very high priority for me and for Californians in the session. It's an extremely valuable natural resource for the people of California and the Nation.

It's the only Mediterranean-type ecosystem included in our National Park System. Moreover, with its tremendously scenic coastal canyons and unspoiled mountain lands, the Santa Monica Mountains offer vast recreational opportunities for the public.

Today, more than one-half million people visit this national park annually. And, because of its location in a major metropolitan area where open space is limited, usage is bound to increase.

In fact, the Santa Monica Mountains National Recreation Area has the potential to be one of the most heavily used parks in the whole National Park System.

Mr. Chairman, I deeply appreciate your recognition of the importance of the Santa Monica Mountains and your invaluable assistance in securing the $12 million appropriation for the park in fiscal year 1990. I am pleased to report that with this money the National Park Service is making substantial progress in acquiring lands along the Backbone Trail and in Zuma and Trancas Canyons.

However, because of the continuing intense pressures to develop in the Santa Monica Mountains, and they are very intense, it is urgent that the National Park Service receive sufficient funds in fiscal 1991 to continue purchases of key parcels. This is essential to protect 16,662 acres that the Park Service has already acquired, to enhance visitor use of the park, and to ensure that proposed parklands are not lost to incompatible development or simply become too expensive to buy due to rising land values in the area.

I strongly recommend an appropriation of $33 million in fiscal year 1991. There are plenty of justifications for this level of funding.

For example, the National Park Service could continue the acquisition of critical properties along the Backbone Trail and in Zuma and Trancas Canyons—that would be $16 million—purchase lands in Upper Corral Canyon, $7 million, and spent $10 million on other key areas.

Additionally, I would like to request an increase in the operation and maintenance budget for the Santa Monica Mountains. It's my understanding that the National Park Service needs $978,000 over the President's request of $2 million for operation and maintenance of this park.

Finally, and perhaps most importantly, I urge you to include language in the fiscal year 1991 bill prohibiting the National Park Service from using any fiscal year 1991 funds to proceed with an exchange of any lands in the Cheeseboro Canyon unit of the Santa Monica Mountains Recreational Area.

Purchased in 1981 and 1984 at a cost of over $13 million, Cheeseboro Canyon is now visited by 2,200 people each month. It is one of the jewels of the national park, possessing diverse natural and cultural resources.

Adjacent to Cheeseboro Canyon is Jordan Ranch, 2,308 acres of pristine canyon lands, one of the last undeveloped valley oak savannah areas of significant size. The property supports an abundant bird population—woodpeckers, golden eagles, and grassland species—and is an important wildlife corridor needed to assure biological diversity between animal populations in the Santa Monica and Santa Susana Mountains and the Simi Hills.

Four separate times, the National Park Service has identified Jordan Ranch, also known as Palo Comado Canyon, as property it wants for the Santa Monica Mountains National Recreation Area:

In the 1980 land acquisition plan, the 1982 general management plan, the 1984 land protection plan and the 1987 addendum to the land protection plan.

However, now the National Park Service is considering a proposal to exchange a portion of Cheeseboro Canyon to provide access to and facilitate the development of Jordan Ranch. This situation is deeply, deeply troubling.

Jordan Ranch has repeatedly, as I've said, been identified for Federal acquisition as part of the recreation area. The Park Service should be seeking to acquire that property and to protect the resources of Jordan Ranch.

I am dismayed that the National Park Service is opening the door to commercial development of what one day should be national parkland. In my judgment, they are acting directly contrary to the mission of the Park Service.

In 1987, both the Park Superintendent and the Deputy Assistant Secretary of Interior rejected this proposed exchange. That should have been the end of the matter.

However, the Western Regional Director of the Park Service subsequently directed the Park Superintendent to inform the Ventura County Board of Supervisors that the Park Service had no objections to consideration of a zoning change and a project, dependent upon access across existing parklands, with 1,152 luxury homes and a professional level golf course.

This reversal of the Park Service position is even more egregious in light of the fact that the Ventura County staff recommended the board of supervisors reject the development.

Californians tell me that the Jordan Ranch development will degrade the national recreation area, adversely affect the flow of a creek that provides water for parklands and destroy the wildlife corridor through Cheeseboro Canyon.

I feel that it is absolutely essential that you provide specific language in the fiscal year 1991 Interior appropriations bill to prohibit the Park Service from using any funds to proceed with an exchange involving Cheeseboro Canyon lands to provide access to Jordan Ranch.

PREPARED STATEMENT

One final very brief word. I would like to mention that there are a number of other important land acquisitions and Interior activities in California which deserve funding in fiscal year 1991 as well. These requests are covered in my complete testimony which I have submitted.

I thank you for your consideration of all these requests and most especially of the Santa Monica Mountains. Thank you very much.

[The statement follows:]

STATEMENT OF SENATOR ALAN CRANSTON

Mr. Chairman, I'm pleased to appear before the Senate Appropriations Committee Subcommittee on Interior and Related Agencies to testify in support of Fiscal Year 1991 funding for the Santa Monica Mountains National Recreation Area.

The Santa Monica Mountains National Recreation Area, as you know, is an extremely valuable natural resource to the people of California and the nation. It is the only Mediterranean-type ecosystem included in our National Park System. Moreover, with its tremendously scenic coastal canyons and unspoiled mountain lands, the Santa Monica Mountains offer vast recreational opportunities for the public. Today more than half a million people visit this national park annually. And because of its location in a major metropolitan area where open space is limited, usage is expected to increase. In fact, the Santa Monica Mountains NRA has the potential to be one of the most heavily used parks in the National Park System.

Mr. Chairman, I deeply appreciate your recognition of the importance of the Santa Monica Mountains and your invaluable assistance in securing the $12 million appropriation for the park in Fiscal Year 1990. I'm pleased to report that with this money the National Park Service is making substantial progress in acquiring lands along the Backbone Trail and in Zuma and Trancas Canyons. Thus far, the park has purchased 5 parcels totaling 277 acres and is in negotiations on 5 parcels, in appraisal review on 16 parcels, in appraisal process on 19 parcels, and in solicitation on 3 properties.

However, because of the continuing intense pressures to develop in the Santa Monica Mountains, it is urgent that the National Park Service receive sufficient funds in Fiscal Year 1991 to continue purchases of key parcels. This is essential to protect

16,662 acres the Park Service has already acquired, to enhance visitor use of the park, and to ensure that proposed parklands are not lost to incompatible development or simply become too expensive to buy due to rising land values in the area.

The President's budget request for Fiscal Year 1991 includes $11.5 million for the Santa Monica Mountains land acquisition. But the needs at Santa Monica Mountains are far greater than this amount and the National Park Service could effectively use much, much more money.

I strongly recommend an appropriation of $33 million in Fiscal Year 1991. There are plenty of justifications for this level of funding. For example, the National Park Service could continue the acquisition of critical properties along the Backbone Trail and in Zuma and Trancas Canyons ($16 million), purchase lands in Upper Corral Canyon ($7 million), and spend $10 million on other key areas. These include properties located adjacent to Circle X Ranch, 1,600 acres already in federal ownership; land adjacent to Rancho Sierra Vista, 1,500 acres also owned by the park; and the Rancho Sierra Vista-Leo Carillo Connection. All of these areas are identified for federal acquisition in the Santa Monica Mountains NRA Land Protection Plan and include parcels with willing sellers.

Additionally, I would like to request an increase in the operation and maintenance budget for the Santa Monica Mountains. It's my understanding that the National Park Service needs $978,000 over the President's budget request of $2 million for operation and maintenance of this park. Although the land base for the park has more than doubled since 1985, the operation and maintenance budget for Santa Monica Mountains has remained roughly the same. Adjusted for inflation, the operation and maintenance budget is actually lower than 1985. As a result, the park does not have adequate staff to protect park resources, provide interpretive services, monitor land development in the mountains, respond to community requests for Park Service participation in cooperative planning, or carry out normal maintenance work.

Finally, and perhaps most importantly, Mr. Chairman, I urge you to include language in the Fiscal Year 1991 Interior Appropriation Bill prohibiting the National Park Service from using any FY 1991 funds to proceed with an exchange of any lands in the Cheeseboro Canyon unit of the Santa Monica Mountains NRA.

Purchased in 1981 and 1984 at a cost of over $13 million, Cheeseboro Canyon is now visited by 2,200 people a month. It is one of the jewels of the national park, possessing diverse natural and cultural resources. Adjacent to Cheeseboro Canyon is Jordan Ranch, 2,308 acres of pristine canyon lands, one of the last undeveloped valley oak savannah areas of significant size. The property supports an abundant bird population -- woodpeckers, golden eagles, and grassland species -- and is an important wildlife corridor needed to assure biological diversity between animal populations in the Santa Monica and Santa Susana Mountains and the Simi Hills.

Four separate times, the National Park Service has identified Jordan Ranch (also known as Palo Comado Canyon) as property it wants for the Santa Monica Mountains National Recreation Area: in the 1980 Land Acquisition Plan, the 1982 General Management Plan, the 1984 Land Protection Plan, and the 1987 Addendum to the Land Protection Plan. The 1987 document explicitly reaffirms that outright federal acquisition of this property is needed in order to protect the special natural, cultural, and scenic values for which the Santa Monica Mountains NRA was established. However, now the National Park Service is considering a proposal to exchange a portion of Cheeseboro Canyon to provide access to and facilitate the development of Jordan Ranch.

Under the proposal, the National Park Service would receive 864 acres in the China Flat area of Jordan Ranch in exchange for 59 acres of existing national park land in Cheeseboro Canyon. The Park Service also would receive up to $1 million from the developer of Jordan Ranch for construction of a new visitor center for the Santa Monica Mountains NRA and all the revenues from a parking concession for the PGA Tour event on Jordan Ranch.

In addition, the owners of Jordan Ranch have agreed to convey 4,772 acres in the Santa Monica Mountains to the Santa Monica Mountains Conservancy, an agency of the State of California, to be preserved for public park and recreational use. This includes 403 acres within the boundaries of the National Recreation Area and 4,369 acres outside the boundaries of the park. The transfers to the state are contingent upon the National Park Service approving the exchange of Cheeseboro Canyon lands to provide road access to develop Jordan Ranch.

Mr. Chairman, this situation is deeply troubling.

As I've already mentioned, Jordan Ranch has repeatedly been identified for federal acquisition as part of the Santa Monica Mountains National Recreation Area. The Park Service should be seeking to acquire that property and to protect the resources of Jordan Ranch.

I am dismayed that the National Park Service is opening the door to commercial development of what one day should be national parkland. In my judgment, they are acting directly contrary to the mission of the Park Service.

In 1987 both the park superintendent and the Deputy Assistant Secretary of Interior rejected the proposed exchange. That should have been the end of the matter. However, the Western Regional Director of the Park Service subsequently directed the park superintendent to inform the Ventura County Board of Supervisors that the Park Service had no objections to consideration of a zoning change and a project, dependent upon access across existing parklands, with 1,152 luxury homes and a professional-level golf course. This reversal of the Park Service position is even more egregious in light of the fact that Ventura County staff recommended the Board of Supervisors reject the development.

Californians tell me the Jordan Ranch development will degrade the national recreation area, adversely affect the flow of a creek that provides water for parklands, and destroy the wildlife corridor through Cheeseboro Canyon.

Without a doubt the proposed project would be more detrimental to park values than development under current zoning which allows the construction of only 15 ranchettes.

Additionally, the law requires exchanges to be equal in value. But this proposal does not appear to be of equal value at all when one considers the tremendous benefit of the exchanged land to the multi-million dollar Jordan Ranch development.

There has been considerable opposition in California to the development of Jordan Ranch and to the exchange since it was first proposed. In response, the owners of Jordan Ranch have twice modified their plans. First they supplemented their proposal by offering to sell 306 acres at less than fair market value to the Santa Monica Mountains Conservancy. Recently they offered to donate and sell even more land to the state and to reduce the number of houses to 750. This may make the proposal attractive to the state -- but the critical issue is whether the exchange is in the interests of the national park. I do not think it is.

Mr. Chairman, I feel it is absolutely essential that you provide specific language in the FY 1991 Interior Appropriations Bill to prohibit the Park Service from using any funds to proceed with an exchange involving Cheeseboro Canyon lands to provide access to Jordan Ranch.

Before closing, Mr. Chairman, I'd like to call your attention to a number of other important land acquisitions and Interior activities in California which deserve funding in Fiscal Year 1991 as well. These include ongoing BLM acquisitions for the Carrizo Plain, Chuckwalla Bench ACEC, and Desert Tortoise Natural Area, Santa Rosa Mountains, and inholdings along the Merced Wild and Scenic River; Forest Service acquisitions at Lake Tahoe, in Hope Valley (Toiyabe National Forest), Grouse Lakes (Tahoe National Forest), and Pacific Crest Trail lands at Castle Peak (Tahoe National Forest); National Park Service acquisitions to complete the John Muir National Historic Site, Golden Gate National Recreation Area, and Channel Islands National Park, and Fish and Wildlife Service acquisitions of Parrott Ranch and additions to the San Francisco Bay and Sacramento River National Wildlife Refuges.

Additionally there is strong support in California for National Park Service assistance with the Bay Area Ridge Trail project, construction of a visitor center at Lassen National Park, and expansion and modernization of the desert museum and visitor center at Death Valley National Monument, Forest Service funding of the Clovis Unified School District's environmental education program on the Stanislaus National Forest and erosion control projects at Lake Tahoe, increased BLM funding for rangers in the California desert, and Fish and Wildlife Service assistance with preparation of the habitat conservation plans for Riverside, Kern, and San Diego Counties. I hope the Subcommittee will be able to fund these activities as well.

Chairman **Byrd**. Thank you, Senator Cranston, for your very cogent and persuasive statement. It is obvious that you feel very strongly about it, that you know what you are talking about and that you have spent considerable effort in preparing your testimony.

It will be carefully examined and will be helpful to the subcommittee as it marks up the bill.

Senator **Cranston**. Thank you very much.

Chairman **Byrd**. Senator McClure?

Senator **McClure**. Thank you very much, Mr. Chairman. Just very briefly, we've had this conversation annually but there is still an area where we could get some help. And, that's from the local authorities in Zuma.

Two things would help us there. One is the reduction in the need for Federal acquisitions; and, second, with appropriate zoning the cost of acquisitions are reduced where they are necessary.

And, it continues to concern me that the local units of government are not as supportive of this proposal as you believe they should be and as I believe they should be. And, I will continue to do what I can with respect to this budget.

But, you know, the budget demands are very great with respect to the Santa Monica Mountains. They are one of the more expensive projects that we have. And, we are simply unable to put as much money into it each year as is requested.

Senator **Cranston**. Yes, sir; I understand that.

Senator **McClure**. That's all an old story to you.

Senator **Cranston**. I appreciate your sympathy and your understanding. Let me say that I recognize the need.

There was at least one election just last Tuesday where someone who was an incumbent in a local supervisorial body and supported this exchange of land was defeated by somebody who made the whole issue, defeating this exchange of lands. So, maybe we are making progress where it will get more support.

Chairman **Byrd**. Senator Reid?

Senator **Reid**. I have nothing, Mr. Chairman.

Chairman **Byrd**. Senator Domenici?

Senator **Domenici**. I have nothing, Mr. Chairman.

Chairman **Byrd**. Thank you again, Senator Cranston. Thank you a great, great deal.

Senator **Cranston**. You are very welcome.

PREPARED STATEMENT OF SENATOR LOTT

Chairman **Byrd**. At this time, at this place in the record, the Chair, without objection, will include a statement of Senator Trent Lott at his request, and it will be included in its entirety.

It is relative to funding for matters concerning the protection and enhancement of Mississippi's natural resources and public lands.

[The statement follows:]

STATEMENT OF SENATOR TRENT LOTT

Mr. Chairman, I would like to thank you for allowing me to come before you to request funding for matters relative to the protection and enhancement of Mississippi's natural resources and public lands. I also want to offer my deep appreciation for your assistance in securing funding in FY '90 for projects which were of great importance to the State of Mississippi.

I am specifically referring to the Natchez National Historical Park. I could not be more pleased with the tremendous success and progress of this new addition to the National Park Service. The Natchez National Historical Park is well on its way to being, in my opinion, one of the finest units of the National Park System and certainly one of the best examples of the history of the Antebellum South. I am pleased to let you know that the Natchez National Historical Park will be fully operational during the height of the 1990 visitor season.

With your assistance, the Melrose property was acquired through the FY 90 appropriation of $5.27 million. The National Park Service officially assumed ownership of Melrose just last week. We are seeking $501,000 in FY 91 for the operation of the Melrose estate in FY 91. This figure assumes a full time staff of thirteen people, including a curator, rangers/interpreters, maintenance workers and a grounds crew. Secretary Manuel Lujan will be joining us in Natchez next month at the official dedication of this landmark to the National Park Service.

We were also successful last year in our endeavor to have the Fort Rosalie site, another important property for the park, recognized by the Secretary of Interior as having "national significance and integrity" which was mandated by the authorizing legislation for inclusion in the Park. Now that this official designation is complete, the next major step for the park is to acquire this area of land which encompasses 25 acres. I am, therefore, asking that you provide $3.73 million in the FY 91 Interior Appropriations bill for acquisition of this land which is known collectively as the Fort Rosalie site. This amount would enable the National Park Service to acquire the various parcels of land and includes estimates for its Land Protection Plan, additional appraisal work, closing costs, and escalations in land values.

By law, the General Management Plan for the Natchez National Historical Park must be completed before October 7, 1991. We are seeking approximately $150,000 in planning funds necessary to continue this project.

Mr. Chairman, I would also like to bring to your attention our efforts to include the William Johnson House in the Natchez Park. This landmark is the historic home of a freed black who was a prominent figure among the Natchez blacks of this time. William Johnson left extensive diaries of his life which now serve as some of finest documents of black history in the Antebellum South. I, along with Sen. Thad Cochran, have introduced legislation which would authorize this acquisition. With the help of my colleagues on the Energy and Natural Resources Committee, I expect this bill to move quickly with hearings to take place in the very near future. This home will be purchased with state, local, and private sector funds; no federal dollars are being requested for the acquisition. However, I am requesting that you include $500,000 in the FY 91 bill for repairs, museum costs, and restoration of this significant site.

Mr. Chairman, my total request for the Natchez National Historical Park is just under $4.9 million. The people of Mississippi have indicated their commitment to the Park with state, local, and private funding of over $4.2 million. As you are well aware, the Natchez National Historical Park is of tremendous importance to our State and I am hopeful that you will see fit to include adequate funding so that we may continue this progress in FY 91.

In addition, Mr. Chairman I would like to ask your assistance in protecting another important site in the State of Mississippi. This request is for the establishment of the Dahomey National Wildlife Refuge in Bolivar County. The Dahomey Plantation is located in North Mississippi and has been recognized as the largest bottomland hardwood forest ecosystem in the north Mississippi Delta. It also has been identified by the U. S. Fish and Wildlife Service as one of the four top acquisition sites in Mississippi to meet the goals of the North American Waterfowl Management Plan. This land has extensive wildlife value and will provide excellent recreational and educational opportunities in an area of our State with limited public land accessibility. I am requesting $3 million for the initial acquisition of this land which is currently being held by the Mississippi Nature Conservancy. I hope that your committee will carefully review the significance and value of this property.

Finally, Mr. Chairman, I would like to request $200,000 in FY 91 for a study of the proposed Mississippi River Park in Vicksburg, Mississippi. These funds would allow the National Park Service to work in cooperation with the U. S. Army Corps of Engineers on a study of the riverfront and cultural landscapes in the city of Vicksburg. The National Park Service would present the city a plan for the development of a riverfront park which would address both the recreational and historic resources of this river city. Government officials at the state and local level have indicated their strong willingness to participate in this project and I am hopeful that you will see fit to secure funds in FY 91 for this study.

Mr. Chairman, in closing, I sincerely appreciate your consideration of the above matters of critical importance my State. Your assistance in the past has been invaluable to the State of Mississippi.

DEPARTMENT OF ENERGY

SECRETARY OF ENERGY

STATEMENT OF ADM. JAMES D. WATKINS, SECRETARY

ACCOMPANIED BY:

- ELIZABETH E. SMEDLEY, CONTROLLER
- ROBERT H. GENTILE, ASSISTANT SECRETARY FOSSIL ENERGY
- J. MICHAEL DAVIS, ASSISTANT SECRETARY CONSERVATION AND RENEWABLE ENERGY

PREPARED STATEMENT

Chairman BYRD. That completes the list of congressional witnesses for today.

The subcommittee's next witness will be Adm. James D. Watkins, Secretary of Energy. Welcome before the subcommittee, Mr. Secretary.

We have your prepared statement. It will be included in the record as though read in full.

[The statement follows:]

STATEMENT OF ADM. JAMES D. WATKINS, SECRETARY OF ENERGY

Mr. Chairman and members of the Committee, I am pleased to appear before you today to present an overview of the Department of Energy's FY 1991 budget request. This is the first budget prepared entirely by the Bush Administration, and it reflects new approaches in a number of technology areas as well as a new appreciation of the costs of past neglect.

The FY 1991 budget request for the Department of Energy is $17.5 billion, an increase of 6.4 percent over the FY 1990 level. I would now like to highlight several of the more important programs and initiatives included in this budget. In doing so, I will group the programs into categories which correspond to our present understanding of the emerging National Energy Strategy (NES), with modifications to permit discussion of the entire DOE budget, including those programs, such as defense and management oversight, which are not part of the NES. While the NES is seven months away from completion, the FY 1991 budget places higher priority on energy efficiency improvements and renewable technologies. This realignment of priorities is supported by the extensive public consultation process that the Department has been conducting since the summer of 1989 in conjunction with the development of the NES.

RESPECTING THE ENVIRONMENT

Managing facilities in an environmentally sound manner and restoring environmentally damaged sites are the highest priorities in the Department. The Environmental Restoration and Waste Management Five-Year Plan is the cornerstone of the Department's long-term strategy to vigorously manage DOE's cleanup activities. An Office of Environmental Restoration and Waste Management has been established to manage and direct Five-Year Plan activities.

The estimated cost identified by the Five-Year Plan is $19.0 billion for FY 1990-1995 for completing the highest priority activities (in addition to $0.7 billion for uranium enrichment cleanup). The $2.8 billion budget request for FY 1991 will fund activities necessary to prevent near-term adverse safety and environmental impacts, promote compliance with existing agreements, and implement regulatory standards and permits actions that could reduce risks or costs.

Nuclear waste disposal is another major priority of the Department. The program is structured around a "three-point" plan I announced last year. The plan centers on restructuring the Office of Civilian Radioactive Waste Management, initiatives to gain access to the Yucca Mountain site to continue the scientific investigations needed to evaluate the site's suitability for a repository, and an initiative for establishing an integrated Monitored Retrievable Storage (MRS) facility to begin spent fuel acceptance in 1998. The FY 1991 Nuclear Waste Fund budget request of $292.8 million provides for continuation of this three-point program.

INCREASING ENERGY EFFICIENCY AND SECURING FUTURE ENERGY SUPPLIES

In FY 1991, our commitment to conservation and renewables research and development is reflected in the 8 percent budget increase over the FY 1990 appropriation, and the 78 percent increase over the FY 1990 request. The FY 1991 budget request for conservation research and development alone is more than twice the FY 1990 request, and reflects the new priority the Department is according energy conservation. Using energy more efficiently and developing cost-competitive renewable energy will contribute to both a better environment and to reduced U.S. oil imports.

The FY 1991 budget request also is in line with FY 1990 initiatives to increase energy efficiency and the use of renewable energy sources. These initiatives are intended to contribute substantially to reductions in the production of so-called greenhouse gases, and to result in significant energy savings.

The nuclear energy budget supports development of advanced light water reactors (LWRs), modular high temperature gas-cooled reactors (HTGRs), and advanced liquid metal reactors (ALMRs). An important new initiative will confirm the ability of an LMR, using the Integral Fuel Cycle (IFR) concept, to burn up the long-lived waste products in spent commercial light water reactor fuel. If successful, it could greatly reduce the requirements for long-term storage of nuclear waste.

The total FY 1991 budget request for Clean Coal Technology (CCT), including advance appropriations enacted in prior years, is $456 million. This will complete the funding for projects selected in Round 2 ($200 million) and Round 3 ($156 million), and will provide $100 million for the initial funding of Round 4 of the five-round program. The budget request also includes advance appropriations to become available in FY 1992-FY 1994 to fund the remainder of Round 4 and all of Round 5, which will complete funding for this major initiative. Industrial cost sharing in the 39 projects that are currently part of the CCT program has exceeded 60 percent.

I cannot leave the subject of Clean Coal Technology without conveying to you our strenuous opposition to a provision contained in the Clean Air Act amendments passed by the House that would alter fundamentally the character and purpose of the Clean Coal Technology program. Under the House version, all unobligated CCT funds could be applied only to projects at plants owned by utilities with sulfur dioxide emission reduction obligations under Phase I of the bill. Rather than a national program for the demonstration of pioneering technologies that will help this Nation use its abundant reserves of coal well into the future while meeting our environmental goals, the CCT program would become merely a way to have U.S. taxpayers subsidize the cleanup of plants owned by 63 utilities in as few as 21 states. I appreciate your support in working to correct this redirection of the CCT program.

The budget request for Fossil Energy Research and Development programs is about 23 percent higher than the FY 1990 request. This request is based on the need to place federal spending in the context of fiscal constraints, and to focus expenditures on those projects which industry is unlikely to support without assistance. Improved liquid and gaseous fuels extraction technologies are essential to increase domestic oil and gas supplies. A major new item in our Fossil Energy Research and Development budget is a $17 million geoscience initiative to support a regional/reservoir research program that will be jointly funded with consortia of States, industry and universities.

The President's budget proposes to make the Power Marketing Administrations (PMAs) operate in a more business-like manner through repayment reform legislation. The budget also proposes the sale of the Alaska Power Administration and the sale of the Georgia-Alabama system of the Southeastern Power Administration.

The Department continues to support legislation to create a government corporation to manage the uranium enrichment enterprise. We believe it is the best way to meet aggressive foreign competition in enrichment services.

FORTIFYING FOUNDATIONS

Maintaining scientific and technological preeminence is key to this Nation's ability to compete in the increasingly competitive world economy. Our support for basic research and development in such areas as High Energy and Nuclear Physics, Basic Energy Sciences, Biological and Environmental Research, and construction of the Superconducting Super Collider is essential to our future prosperity. The Department's budgets for these science and technology programs show increases across all major program elements.

Funding of $318 million is requested in FY 1991 for the Superconducting Super Collider (SSC), a proton-proton collider having an energy of 20 TeV per beam that will permit exploration of this new domain of physics research which cannot be reached by any other facility either in existence or planned. The SSC is a critical part of the Administration's initiative to strengthen the Nation's position as a world leader in science. Our support for the SSC does not mean diminished support for other science projects. As mentioned above, all of the Department's major science programs are receiving substantial increases in the FY 1991 request, and overall federal research and development funding is proposed to increase $4.5 billion, or seven percent over FY 1990 enacted levels. Within this total, basic research increases $1 billion, or eight percent over FY 1990.

The most recent review by the SSC Laboratory has identified cost increases due to design changes that reflect our increased knowledge since the conceptual design was created four years ago. Consequently, the project cost, scope and schedule are now under review. We plan to build the SSC to the full power level originally proposed, 20 TeV per beam, so we will be studying these cost issues very carefully. The Administration is still committed to the project and committed to building it as nearly as possible to schedule and final projected cost.

Programs of major importance within Biological and Environmental Research include the human genome project and global climate change. The budget requests are $46 million and $66 million respectively, and our work is closely coordinated with other elements of the Government.

One of the most serious educational problems facing the Nation is the declining number of young Americans, including women and minorities, pursuing careers in science and engineering. As a major employer of technically proficient people, the Department has a major responsibility to ensure that the Nation's science education system is capable of meeting future requirements for manpower that can both extend the frontiers of science and manage increasingly demanding technology. The FY 1991 budget includes support for expanded pre-college science education which involves the Department's National Laboratories in local, State, regional, and national partnerships directed at improving pre-college science education.

STRENGTHENING NATIONAL DEFENSE

The Department of Energy contributes to national security through its defense programs and through certain non-defense activities which assure the Nation's preparedness for potential energy emergencies. The budget for our defense programs, including Naval reactors, is $8.5 billion, up from $7.7 billion in FY 1990. Of this increased funding, $500 million is required in FY 1991 to continue the intensive efforts begun in FY 1990 on critical operations improvements throughout the defense complex, particularly at the Savannah River Site and the Rocky Flats Plant.

A significant change in our nuclear materials production program is the decision not to build the Special Isotope Separation (SIS) plutonium facility, and to bring this research and development program to an orderly conclusion, completing ongoing experiments and documenting results.

In contrast to plutonium, our need for a source of supply for tritium remains critically important. A substantial portion of the defense budget is for improvements to reactor hardware, procedures, training, management systems and practices and maintenance, so that we can resume reactor production of tritium as soon as improvements can be made to ensure safe and reliable operation of the Savannah River reactors. Looking to the future, the New Production Reactor program continues to pursue two preferred reactor technologies and sites for new tritium production capacity: a heavy water reactor at Savannah River and a modular high-temperature gas-cooled reactor at the Idaho National Engineering Laboratory. The FY 1991 budget request for New Production Reactors is $363 million.

The Administration no longer is proposing to sell the Federal interest in the Elk Hills and Teapot Dome Naval Petroleum Reserves, but instead has a new proposal which may prove more acceptable to Congress. Under this proposal the fields would be leased competitively, with competition to be expressed in terms of the royalty rate bidders would be willing to pay the Federal government after also paying a lease bonus of $1.6 billion, $1 billion of which would be paid at the end of FY 1991. To ensure that the Department of

Defense has access to oil for use in an emergency, the proposal provides for the creation of a 10 million barrel Defense Petroleum Inventory.

This proposal would enhance energy security and defense preparedness and would reduce the FY 1991 deficit by $1 billion. Draft legislation to permit and authorize the proposed leasing arrangement will be transmitted to the Congress shortly.

The FY 1991 budget request proposes the continued development of the SPR on a schedule to achieve the full 750 million barrels of storage capacity by the end of FY 1991 (capable of fill by the end of FY 1992), and the continued implementation of the ongoing program to increase drawdown capability to 4.5 million barrels per day.

The legislation authorizing the SPR program expires in August 1990. The Department has prepared recommendations to extend the statutory authority and to increase the Department's drawdown flexibility in the event of a Presidential determination to use the Reserve during a supply disruption. A study mandated by Congress in 1989, on alternative methods of financing the SPR, was completed by the Department and transmitted to Congress on February 2. As a result of this study, the Department is seeking discretionary authority to enter into negotiations with one or more major petroleum producers on a leasing arrangement for SPR oil. Under an oil "lease" or "option" concept, the Federal government would obtain control over the oil in the SPR, but without necessarily bearing the full cost of outright purchase. Our intention would be to implement these authorities within available budget resources, as set forth in the President's FY 1991 budget.

At the request of the President, DOE also carried out an interagency study of SPR size. The results of this study, transmitted to Congress on February 2 concurrently with the financing alternatives report, are that a 750 million barrel SPR will provide the U.S. with substantial protection against reasonably foreseeable future disruptions. These conclusions were reached after a comprehensive review of economic, foreign policy, energy security, and strategic considerations by a policy level steering group comprised of representatives of all federal departments and agencies with interest in the SPR. Based on this review, the Administration believes that expansion of the SPR to one billion barrels is neither needed nor justified.

MANAGEMENT AND OTHER ACTIVITIES

The budget proposes a major change to the Conservation Grants program. We believe that in view of the substantial resources made available to these programs from oil overcharge funds distributed to the States, there is currently no need to provide direct federal grants. Instead, we are proposing incentive funding for the States through the Weatherization Assistance Program. A total of $15 million is requested for two initiatives; $5 million to stimulate innovative programmatic approaches and $10 million to leverage non-governmental funding resources. Another $15 million is being requested for oversight and monitoring of State use of oil overcharge funds. It is expected that the funding requirements will be offset by funds from the Petroleum Overcharge Distribution and Restitution Act (PODRA) declared excess by the Office of Hearings and Appeals.

STAFFING

Many of the Department's most important programs have been adversely affected by difficulties in attracting highly qualified people in critical areas. DOE worked closely with the Office of Personnel Management to develop legislation on a government-wide basis to establish a special salary structure for a limited number of very critical technical positions and to exempt a number of technical positions from the strictures of the "dual compensation" laws so that we might attract some highly qualified individuals to civilian federal service. These provisions are included in the Administration's federal pay reform legislation recently submitted to Congress. I strongly urge prompt action on that legislation.

Mr. Chairman, I believe the Department of Energy's FY 1991 budget request is sound and strongly supports our energy, science, and defense missions with a proper regard for the environment and for the health and safety of our workers and the citizens of the United States. I look forward to working with the Congress to achieve these objectives.

INTRODUCTION OF ASSOCIATES

Chairman **Byrd**. Would you at this time please introduce any supporting witnesses that you would like to have appear and then make any introductory remarks that you may choose before we proceed with the questions?

Admiral **Watkins**. Yes; I have with me today, Mr. Chairman, Mr. Bob Gentile, the Assistant Secretary for Fossil Energy. And, I have my Controller, Ms. Betty Smedley, with me today to assist me here during the discussion.

Chairman **Byrd**. We are very happy to have your associates appear with you. And now, if you will, proceed.

SUMMARY STATEMENT

Admiral **Watkins**. Thank you, Mr. Chairman. I am honored again to appear before this committee to provide you an overview of the Department of Energy's fiscal 1991 budget request.

This is the first budget request prepared entirely by the Bush administration, and it reflects new approaches in a number of technology areas as well as a new appreciation of the costs of past neglect.

The fiscal year 1991 budget request for the Department of Energy is $17.5 billion, an increase of 6.4 percent over the fiscal year 1990 level. My written statement for the record summarizes the entire budget request, but I would like to focus my oral remarks today on proposed major programs under the jurisdiction of this subcommittee.

In fiscal year 1991, our commitment to conservation and renewables research and development is reflected in the 8-percent budget increase over the fiscal year 1990 appropriation and the 78-percent increase over the fiscal year 1990 request.

The fiscal year 1991 budget request for conservation research and development alone is more than twice the fiscal year 1990 request. It reflects the new priority the Department is according energy conservation.

Using energy more efficiently and developing cost-competitive renewable energy will contribute to both a better environment and to reduced U.S. oil imports.

The fiscal year 1991 budget request also is in line with fiscal year 1990 initiatives to increase energy efficiency and the use of renewable energy sources. These initiatives are intended to contribute substantially to reductions in the production of so-called greenhouse gases and to result in significant energy savings.

The total fiscal year 1991 budget request for clean coal technology, including advanced appropriations enacted in prior years, is $456 million. This will complete the funding for projects selected in round 2, $200 million, and round 3, $156 million, and then will provide $100 million for the initial funding of round 4 of the five-round program.

The budget request also includes advance appropriations to become available in fiscal year 1992 through fiscal year 1994 to fund the remainder of round 4 and all of round 5, which will complete the funding for this major initiative. Industrial cost sharing in the 38 projects that are currently part of the Clean Coal Technology Program has exceeded 60 percent.

There are two issues concerning the Clean Coal Technology Program that I would like to address directly. The *WEPCO* decision still remains a threat to current and future participants in the Clean Coal Technology Program. We are continuing to work with both EPA and Congress to resolve this issue.

While EPA has expedited the resolution of some projects and specific issues in a satisfactory manner, we continue to encourage EPA to seek a permanent long-range solution to the problem.

At the same time, we are working with Congress on legislative remedies which may be necessary to fully protect the program.

And, finally I cannot leave the subject of clean coal technology without conveying to you our strenuous opposition to a provision contained in the Clean Air Act Amendments passed by the House that would alter fundamentally the character and purpose of the Clean Coal Technology Program.

Under the House bill, all unobligated clean coal technology funds would be applied only to projects at plants owned or operated by utilities with sulfur dioxide emission reduction obligation under phase I of the bill. Rather than a national program for the demonstration of pioneering technologies that will help this Nation use its abundant reserves of coal well into the future while meeting our environmental goals, the Clean Coal Technology Program would merely become a way to have U.S. taxpayers subsidize the cleanup of plants owned by 63 utilities in as few as 21 States.

I appreciate your support in working to correct this redirection of the Clean Coal Technology Program.

The budget request for fossil energy research and development programs is about 23 percent higher than the fiscal year 1990 request. This request is based on the need to place Federal spending in the context of fiscal constraints and to focus expenditures on those projects which industry is unlikely to support without assistance.

Improved liquid and gaseous fuels extraction technologies are essential to increase domestic oil and gas supplies. A major new item in our fossil energy research and development budget is a $17 million geoscience initiative to support a regional/reservoir research program that will be jointly funded with consortia of States, industry, and universities.

The administration no longer is proposing to sell the Federal interest in the Elk Hills and Teapot Dome Naval Petroleum Reserves but instead has a new proposal which may prove more acceptable to Congress. Under this proposal, the fields would be leased competitively with competition to be expressed in terms of the royalty rate bidders would be willing to pay the Federal Government after also paying a lease bonus of $1.6 billion, $1 billion of which would be paid at the end of fiscal year 1991.

To ensure that the Department of Defense has access to oil for use in an emergency, the proposal provides for the creation of a 10 million barrel defense petroleum inventory.

This proposal would enhance energy security and defense preparedness and would reduce the fiscal year 1991 deficit by $1 billion. Draft legislation to permit and authorize the proposed leasing arrangement will be transmitted to Congress shortly.

The fiscal year 1991 budget request proposes the continued development of the SPR on a schedule to achieve the full 750 million barrels of storage capacity by the end of fiscal year 1991—that is, capable of fill by the end of fiscal year 1991—and the continued implementation of the ongoing program to increase drawdown capability to 4.5 million barrels a day.

The legislation authorizing the strategic petroleum reserve program expires in August 1990. The Department has prepared recommendations to extend the statutory authority and to increase the Department's drawdown flexibility in the event of a Presidential determination to use the reserve during a supply disruption.

A study mandated by Congress in 1989 on alternative methods of financing the SPR was completed by the Department and transmitted to Congress on February 2, 1990. As a result of this study, the Department is seeking discretionary authority to enter into negotiations with one or more major petroleum producers on a leasing arrangement for SPR oil.

Under an oil lease or option concept, the Federal Government would obtain control over the oil in the SPR but without necessarily bearing the full cost of outright purchase. Our intention would be to implement these authorities within the available budget resources, as set forth in the President's fiscal year 1991 budget request.

The budget request proposes a major change to the conservation grants programs. We believe that in view of the substantial resources made available to these programs from oil overcharge funds distributed to the States, there is currently no need to provide direct Federal grants.

Instead, we are proposing incentive funding for the States through the Weatherization Assistance Program. A total of $15 million is requested for two initiatives: $5 million to stimulate innovative programmatic approaches and $10 million to leverage nongovernmental funding resources.

Another $15 million is being requested for oversight and monitoring of State use of oil overcharge funds. It is expected that the funding requirements will be offset by funds from the Petroleum Overcharge Distribution and Restitution Act declared excess by the Office of Hearings and Appeals.

Mr. Chairman, I believe that the Department of Energy's fiscal year 1991 budget proposals in areas of particular interest to this subcommittee are sound and strongly support our energy, science, and defense missions.

I look forward to working with the Congress to achieve these objectives. And, I now stand by for any questions you may have.

CLEAN COAL TECHNOLOGY

Chairman **Byrd**. Thank you, Mr. Secretary. Your statement says that the total fiscal year 1991 budget request for clean coal technology, including advanced appropriations enacted in prior years, is $456 million.

Would you state how much remains of the advanced appropriations once the $456 million is subtracted?

How much overall——

Admiral **Watkins**. Approximately $1.2 billion remains for rounds 4 and 5.

Chairman **Byrd**. Would you begin at the beginning? How much was the initial figure?

Admiral **Watkins**. That started in fiscal year 1986, Mr. Chairman. It was $99.4 million. The next year, $149.1 million. In fiscal 1988, $199 million. In fiscal 1989, $190.1 million. In fiscal 1990, $554 million. And, as you know, some of that was capped and so that has been extended into fiscal year 1991. Then fiscal year 1991, $456 million. Fiscal year 1992, $400 million. Fiscal year 1993, $475 million. And, fiscal year 1994, $225 million. That would basically complete the program.

Chairman **Byrd**. Now, what will that total?

Admiral **Watkins**. It will be actually more than the $5 billion. It will turn out to be about $6 billion, because we have a greater participation by industry than we had anticipated.

Chairman **Byrd**. I am talking about just the Federal funds.

Admiral **Watkins**. It will be at approximately $2.5 billion.

Chairman **Byrd**. It will be $2.5 or $2.7 billion?

Admiral **Watkins**. $2.75 billion, I understand.

Chairman **Byrd**. $2.75 billion? Now, after the $456 million is provided for, then there is $200 million. Then, what would be the remaining amounts?

Admiral **Watkins**. It would be about $1.2 billion.

Chairman **Byrd**. About $1.2 billion?

Admiral **Watkins**. Right. It will be $400 plus $475 plus $225 million. That is $1.1 billion.

NATIONAL ENERGY STRATEGY

Chairman **Byrd**. You have reached the midpoint in a 16-month effort to develop a national energy strategy which you intend to submit to the President this December. But, you have stated that you do not intend to wait for the finalization of this report before taking actions on important energy issues.

Would you identify the important energy issues and the actions that you have taken?

Admiral **Watkins**. Yes, sir; it goes something like this: In the fiscal year 1991 budget request, we adjusted the budget for the overwhelming evidence coming in from our hearings on the subjects of efficiency, conservation, and planning.

And, this was so significant that we modified our budget request to bring it far more in line with what Congress has been telling us for some time and what has been appropriated by Congress in a number of areas, particularly in the area of efficiency, conservation, and renewables, as well as a shift in emphasis on research for enhanced oil recovery, for example.

We were looking only at high-risk, long-term oil research, and this was not in the best interest, in our feeling, of the country at a time when we were increasing our imports. We worried about stable supplies of oil, and felt that we had sufficient reserves in the ground untapped to go after such things as consortia with private industry and academia in order to enhance our oil recovery through imaging of fields, through horizontal drilling, and the like, to see if we couldn't have a cost-effective extraction of oil from existing resources at lower competitive costs.

So, these are the kinds of areas that shifted focus and brought us really more in line with, you might say, last year's appropriated budget.

I could provide more details of that kind and specify exactly what those budget shifts were, if you would like, Mr. Chairman, for the record. I don't have that data with me in greater detail than I just gave you.

Chairman BYRD. Very well. I think that would be helpful.

[The information follows:]

NES AND THE BUDGET

The National Energy Strategy [NES] process has resulted in several changes to the fiscal year 1991 budget. The request for conservation and renewable energy research and development was increased by 78 percent over the request for fiscal year 1990. The request for Fossil Energy's oil and gas program was increased by $10 million over the fiscal year 1990 budget. This increase will be used to fund a $17 million geosciences consortia program. This program with the National Laboratories, academia and private industry will focus on the critical issue of well abandonment.

Additionally, the NES process is strongly influencing preparation of the fiscal year 1992 budget.

CLEAN AIR ACT AMENDMENTS—HOUSE VERSION

Chairman BYRD. Before I yield to my colleagues, would you comment on the energy policy implications of the clean air legislation as you see it from the standpoint of both the House-passed legislation and the Senate-passed legislation?

What will that do to prices? What will it do to the use of one fuel as against another?

I think you have already indicated your opposition to an amendment that was offered in the House to that legislation. How do you see the impact of that amendment if it were to survive the conference on our Clean Coal Technology Program?

Admiral WATKINS. Let me start with the latter, because I think it's one of the most important issues that we need the support of this committee on.

Clearly, the actions in the so-called Sharp amendment in the House to provide the clean coal technology rounds 4 and 5 funds to clean up 63 utilities in 21 States would basically emasculate the Clean Coal Technology Program at a very critical time of its maturation. We are trying to take advantage of clean coal technology rounds 1 and 2 as we migrate into rounds 4 and 5 to give us the very best combination we can for repowering.

As you know, we believe repowering is not only capable of giving us the SO_2 and NO_x reductions but more importantly will give us significantly enhanced efficiencies and, hence, lower CO_2 production.

Also, we have some imaginative programs for cleaning up such things as the high moisture coal in an Alaska experiment in clean coal technology which could give the country an enhanced export capability to the Pacific Rim.

So, all of these things are coming to fruition at a time when the moneys are being taken away, which would force the use of the old technologies and the retrofit technologies, which for the long haul is not in the best interest, in my opinion, of the utilization of our most abundant energy resource in this country.

And, I think it does not bode well for our ability to deal with lesser developed nations and the emerging nations in the exploding democracies in Eastern Europe where we are trying to cooperate with them on clean coal technology and transfer it to Poland and other nations that desperately need this kind of technology, so that they don't start out making a contribution to pollutants in the air which they know one day they are going to have to remediate.

So, all of that is tied up in that one amendment. And, it would do severe damage.

And, I applaud what you did to delay that action, because I think you had to, at this point in time, finesse that particular action in the House and basically disallow it from being an alternative. It is not a good alternative.

I'm finding that there are many people in the environmental movement that simply want to see coal removed as an option for the future. I think we have to be very cautious about that.

All our projections in our national energy strategy show that coal is with us for the long haul and what we have got to do is manage it technologically, and I think we can do that.

And, this would destroy a lot of those opportunities. So, the impact of the House-passed bill would be significant and would be very negative.

CLEAN AIR ACT AMENDMENTS—SENATE VERSION

In the Senate bill, we only see one deficiency in this area. We think it can do a better job in dealing with the *WEPCO* decision so that that decision doesn't impact existing coal plants that are trying to improve their efficiencies by doing the kinds of retrofits that may otherwise be charged as modifications for purposes of new source performance standards, et cetera.

And, we think that would be a mistake. So, we believe that with some modifications there we can have a very good WEPCO fix at the same time.

So, basically we are on the Senate side on that issue with some modest changes to the WEPCO protection and very much opposed to that portion of the House bill that would essentially finish the Clean Coal Technology Program at a very critical time.

IMPACT OF CLEAN AIR ACT AMENDMENTS

Chairman **Byrd**. Do you feel that the tight phase 1 and phase 2 deadlines in the clean air legislation will cause the electric utility industry to rely largely on inefficient technologies to meet the more stringent emission limits?

Admiral **Watkins**. I would like to, if I could, Mr. Chairman, ask my expert on that, Assistant Secretary Gentile, to answer that because he has done some recent studies in that area and I think he is more equipped to handle that in specific terms than I am.

Chairman **Byrd**. All right.

Mr. **Gentile**. Mr. Chairman, we've had some discussions about this before, and we are concerned. When you think in terms of the technology, there is no question that the more time we have in terms of meeting technology deadlines, the more favorable.

However, the President felt that we were dealing with an issue that needed to be dealt with quickly in terms of clean air and, therefore, we are driven by other issues.

But, we think that we can have those technologies available so that utilities can make those decisions, and we hope that it will be timely.

UTILITY UTILIZATION OF NEW TECHNOLOGIES

Chairman **Byrd**. Mr. Secretary, what can your Department do to ensure that the technologies are, in fact, not only available but are employed and utilized by the electric utility industry?

Admiral **Watkins**. Everything we are doing in the Clean Coal Technology Program is in close cooperation with American industry. There is nothing that we are going to do to fool American industry into dealing with something that is going to be noncompetitive.

And, so I believe the entire program is staged in a way that we are working so closely with industry, on demonstration projects that are meaningful demonstration projects, that they are going to sell themselves or we won't be in it and they won't be in it.

So, I believe the whole program is set up in a way that we have a good feeling about the risks and the potential gains. We are working so closely with them, I think that there is going to be a fairly natural evolution here without much concern on our part. They are going to pick the very best of the combination of the things we are coming up with, because we are very close to them on this issue, day in and day out.

Chairman **Byrd**. Will you be working with the Federal Energy Regulatory Commission to provide the fullest regulatory incentives possible and with the utility partners in the Clean Coal Demonstration Program to ensure that those demonstration projects move forward as quickly as possible?

Admiral **Watkins**. Yes, sir; we will and with the Environmental Protection Agency. We have to work with both regulatory bodies on that.

And, I think that you will find that in our national energy strategy we will address what we consider to be regulatory barriers to the very things you outlined.

CARBON TAX

Chairman **Byrd**. I have some other questions, which I will ask later, or submit for the record. I do want to get into one other area at the moment.

Is the administration considering a carbon tax as a means of simultaneously addressing the problems of global warming and deficit reduction?

Admiral **Watkins**. I have no personal knowledge of any such effort underway, Mr. Chairman. If it is underway, I have not been privy to it.

I would hope that we would wait for the national energy strategy debate as we close out this 6 months of this calendar year and that we have the wisdom to hold any kind of a tax against fossil energy sources, certainly as they relate to potential global climate change, in abeyance until such time as we know a little bit more about what we are doing.

We have a lot of things happening this year through the IPCC network in the United Nations, the major conference in Geneva, follow-on summits and so forth. There are just too many things going on.

And, what I'm afraid of is that any debate on global climate change, if that's the objective or if that's a spinoff of this, is going to become the national energy strategy before we have a chance to articulate one. Without the economic analysis and the scientific underpinnings, it could well drive the Nation in a direction that is very inefficient.

I've heard these rumors and I've heard talk about it. But, I can tell you that, not even in any private sessions I've had, have I been involved in any discussions about a carbon tax.

But, I would not rule it out, because I have heard the same rumors I think that you all have heard here, that there have been discussions about this at various levels.

Chairman **Byrd**. Well, your response is reassuring. Don't you believe that there would be a very definite impact on our domestic energy production if a carbon tax were to be imposed at the same time that the industry will be attempting to comply with the requirements of a new Clean Air Act?

Admiral **Watkins**. I agree 100 percent with you, Mr. Chairman.

Now, if the issue is revenue for deficits, of course, that's another issue. But, certainly I would hope that we would not preferentially put the burden on carbon. I think that it's extremely premature to do that kind of a thing.

There has been testimony before our national energy strategy hearings generally saying that the price of energy in this country is too low. They are talking energy though. The dollars per quad seems to be out of balance with almost every other industrialized nation of the world.

Well, that may be true. But, we haven't done all the economic analyses on all of that yet. And, that could well be a part of the energy strategy.

But, certainly, as we view it from this vantage point, we don't see that preferentially taxing carbon is doing the right thing for the long-range good of the Nation.

Chairman **Byrd**. Senator McClure?

IMPACT OF CLEAN AIR ACT AMENDMENTS

Senator **McClure**. Thank you very much, Mr. Chairman. If I could just follow on for a moment on clean coal technology, some electric utility companies who are participating in this program or who have been selected to participate have indicated that they may drop out of the program should the Clean Air Act legislation currently pending before the Congress be enacted into law.

What is your assessment of that possibility?

Admiral **Watkins**. May I ask Assistant Secretary Gentile to answer that, sir?

Senator **McClure**. Surely.

Mr. **Gentile**. Senator, I haven't talked to anyone personally who has made that comment. I have talked to several utilities in the last couple of months. There is a considerable concern.

But, most of the utilities that I have talked to feel strongly about the technologies that they are experimenting with, and they think it's critical to their long-term planning.

I have not personally heard that from any utility, sir.

Senator **McClure**. Do you foresee any such problem based on what you've heard or any other consideration?

Mr. **Gentile**. Not at this point, not for those types of reasons.

WEPCO DECISION

Senator **McClure**. You don't believe the Clean Air Act legislation is going to affect their participation?

Admiral **Watkins**. Let me just answer in this area, Senator McClure, because I think it is important.

I talked earlier about the *WEPCO* decision. The *WEPCO* decision is a big decision with the coal industry. It's very important, because they are not going to invest in the kinds of retrofits to enhance their plant efficiencies and so forth, if they are going to be taxed significantly for it as a result.

So, WEPCO becomes a very important consideration, not just for clean coal technology but for all future use of coal under the Clean Air Act. So, I think it is an important decision.

And, clearly if we use the funds that were tailored to give us repowering strategies for the long haul for the Nation by putting them back into meeting old technology demands for selected powerplants, I think that we are not using those moneys properly. And, that will be very discouraging to industry in the future clean coal technology round, they will just not be interested in repowering and they will have no recourse then but to go back to older technology systems.

I think this would be unfortunate. So, in that context, we have to be very cautious: if the Clean Air Act comes out with a WEPCO amendment along the lines of the Senate version, I think we can make it. I don't think we are going to have the opposition.

So, with those two caveats, I would say it was all right.

Senator **McClure**. Are you familiar with the testimony given by Richard Schmalensee of the Council of Economic Advisors before the Senate Energy Committee on May 8, in which he set forth the administration's position on WEPCO?

Admiral **Watkins**. Yes, sir; I am, Senator McClure. I have been briefed on that answer.

Senator **McClure**. How does the administration intend to effectuate the position that he stated?

Admiral **Watkins**. We have been working on an administration position on the final version of the WEPCO provision for some time. We hope within the next 10 days we are going to have a position that takes into account the variety of House negotiation strategies that went on in preparing the existing House version of the clean air bill.

What happens in conference and what the administration's position has been, I haven't been privy to that information. But, I do know that we have a very strong position in the White House deliberations on this, and I hope within 10 days we will have an answer.

But, certainly I think that we can say that it is going to be a real knock-down/drag-out battle if we don't come out with a policy that excludes the imposition of additional regulations on powerplants via application of new source review to existing sources, unless there is an egregious violation of the total environmental rules that we establish in the clean air bill, not for that particular powerplant, but the overall impact when we balance this off with all the trading issues and so forth.

I think that's the issue in the *WEPCO* decision. It's too definitive and too localized. In fact, we want to give flexibility out there to let them manage this program in its totality, since we are now getting into the issue in the southwest region of Texas on one powerplant.

Yes; we know converting to coal is going to, for that particular plant, have an environmental impact, as opposed to the existing gas-fired plant. On the other hand, they want to move to the latest technology in coal.

And, we believe that when we put that in balance with the clean air bill and the trading initiatives that it is in the best interest to let them run a clean coal technology project. We hope to keep them in the game.

But, there again we have to work the NEPA rules and EIS and so forth and that may be too much for them. We hope we can keep them in the game, and we are negotiating with them right now along those lines.

But, those are the kinds of things that impede here.

Senator McCLURE. Well, I am very much concerned as we move into this. I have been a very strong supporter of the efforts by the chairman of this committee with respect to clean coal technology, and the level of money we are putting into that would indicate it's a high priority, as expressed by the Congress.

Then, I see disconnected bits of administration position here or there that affect that effort. I am hopeful that you can give us some advice before we complete the negotiations on the Clean Air Act. That advice certainly going to affect what we do here in this committee.

Admiral WATKINS. I will return to my office reinvigorated.

Senator McCLURE. Thank you. And, if there is some way I can help breathe some urgency into that request——

Admiral WATKINS. Yes; I would think you can, sir.

IMPACT OF HOUSE CLEAN AIR ACT AMENDMENTS

Senator McCLURE. Second, in the same vein, Representative Sharp included language in the House version of the Clean Air Act restricting use of available clean coal technology funds to only the owners or operators of phase one affected sources.

In your judgment, how would such a restriction impact the clean coal program?

Admiral **Watkins**. Well, I mentioned this in my statement and mentioned it again in my discussion. It would limit the program to only 63 utility companies in 21 States which would exclude 29 States and 80 percent of the utility companies.

It biases the clean coal program in favor of retrofit technologies, thereby hurting repowered technologies. It precludes development of technologies for using western coal. It excludes nonutilities. And, it generally undermines support for the whole Clean Coal Technology Program.

Other than that, it's a heck of a good idea. [Laughter.]

Chairman **Byrd**. Do you want to strike that last——

Admiral **Watkins**. I will strike the last remark. [Laughter.]

Chairman **Byrd**. OK.

Senator **McClure**. I appreciate your answer, because again that is the kind of thing we are trying to deal with. It seems to me we have some initiatives that really undermine the energy strategy which still remains a very important imperative for this country.

Admiral **Watkins**. This is a point that Senator Byrd asked me to begin with. He said, "What do you mean by the fact that you are taking advantage of the lessons learned so far in your hearings on the national energy strategy?" Well, this is one of them.

And, the overwhelming interest by most of the responsible witnesses that have come before us is that we have no recourse but to ensure that we put the best technology into coal. Now, we have to do that, not only for ourselves but for other nations in the world.

And, we ought to get on with that. We don't see an alternative inside that solid center band of fossil and nuclear for the future.

With added support from renewables, surely. But, not significant in 40 years, relative to the total quads demanded by this Nation.

In efficiency, sure. Bring down that demand. But, that solid center core is there and we have to deal with it. We can't wish it away.

Therefore, I feel very strongly, as the individual responsible to the President for advice on energy strategy, to tell him to keep a steady hand on the coal tiller right now and not allow excesses and excessive views on the part of some who would want to get rid of it. But, those same people have not done the economic analysis. They have not been realistic about alternative energy sources.

And, I think that it would be very damaging to the national economy which would start a whole deteriorating process by this kind of attack on the source that gives us about 53 percent of our electrical generating capacity today.

ENERGY CONSUMPTION AND GNP

Senator **McClure**. I want to move away from clean coal technology for a moment, not because it doesn't integrate with all the rest of these questions because I think it certainly affects everything we talk about in energy strategy for this country.

If I recall correctly—well, I'm sure I do, as a matter of fact—for many, many years energy consumption in this country tracked GNP growth very, very closely. For a couple of years in the late

1960's, energy growth was slightly less than the GNP growth but it quickly went back on the same path until we ran into the tremendous increases in oil prices following 1973 and 1979.

More recently, however, we have gotten back on that path again with relatively low GNP growth. We've also had relatively low energy consumption growth; nevertheless we have remained very consistently on track.

However, electric energy has grown more rapidly than energy as a whole. Isn't that correct?

Admiral WATKINS. That's correct, sir.

Senator MCCLURE. And, do you foresee that trend continuing? Or, do you think it's going to change in the future?

Admiral WATKINS. In the past few years, as you just stated, energy consumption has exceeded the gross national product, the growth line. Prior to that time, we had almost 10 years of significant growth in the gross national product, about 35 percent with only a 6-percent growth in energy.

And, this was good. We forced our hand on a number of initiatives in conservation efficiencies because we hadn't done very much at all in the past.

That can be done again but probably without the same kind of results. We are on the tail-end of that curve, I'm afraid. We can certainly do a lot, and we are going to do that.

There are probably somewhere around 15 to 25 percent opportunities between now and, say, the year 2005 when we can probably save some quads we would otherwise have to build.

Our projections on the various scenarios we are looking at in the national energy strategy are, as a baseline case, that the gross national product and the electrical generating capacity will stay about co-equal for about 15 years and then we will drop to somewhere below that, a few fractions of a percent below the GNP growth.

Now, we are using OMB and other projections, other models that we have. There is a whole host of scenarios that are in there.

But, clearly the growth is going to be there. We need about 110 gigawatts of electricity between now and the year 2000. We have plans on the drawing board for only 40 percent of that. So, 60 percent is unattended.

Now, as I mentioned, some of that could be achieved by efficiency, without any question, conservation. And, we are going to outline those in our energy strategy in very specific terms.

And, we've started some initiatives along those lines already, building lighting and a whole host of things. I have Assistant Secretary Davis in the room today, if we need to bring him up and talk a little bit about that.

So, therefore, the remaining is still unprotected. The demand is going to be there. And, we don't know how to fill it right now. And, I'm afraid if we leave it alone it will move in a way that regulators tell it to move rather than in efficient ways.

And, that's what I'm worried about. That's why I think the energy strategy is so important now to break that out and have the incentives and the encouragement to move along the line that is the most efficient, not the line that all regulatory features indicate we should move—to outsmart the system, so to speak.

MEETING FUTURE ENERGY NEEDS

Senator **McClure**. I don't mean to prejudice the discussion or even the outcome, but there are long lead times in the development of new technologies, long lead times in the application of technologies, long lead times in the construction of powerplants and getting them on line.

And, you outline a large need. And, you also indicate that over one-half of that need is unmet by current plans. That also tells me that as we near the end of that period, we run into more and more shortages. We will be forced more and more into short-range strategies, not necessarily the best strategies.

Admiral **Watkins**. That is exactly right.

Senator **McClure**. Can you identify where short-range strategies are likely to take us.

Admiral **Watkins**. Yes, sir.

Senator **McClure**. That's not necessarily the best and most balanced energy strategy.

Admiral **Watkins**. And, we have limited opportunities, because nuclear will not change until the turn of the decade, at the year 2000. We will not have any new plants. We will have older plants that have to be repowered.

We are not sure whether we can extend those lives. And, therefore, that's a major component.

Now, that leans back on the fossil resources, the very things that some people want to eliminate. And, if we have extreme actions taken now, that will make the projection you just mentioned even more difficult.

Senator **McClure**. Well, I'm afraid the country doesn't see the urgency of making plans now that affect results 10 years from now. We tend to look at a much closer planning horizon than that, and miss the implications of what is going to happen more than 5 years from now and in the years that come after that.

I'm really very, very much concerned that we won't do that. Even a 3-percent growth rate of GNP or energy demands, that's kind of a median case——

Admiral **Watkins**. What I gave you was about a 2.4-percent growth rate in electricity for the 100 gigawatts.

Senator **McClure**. And 2.4 percent says you double in 30 years. So, by the year 2020 we would have twice as much of a demand as we have today.

Admiral **Watkins**. That's about right, sir.

ENERGY ASSISTANCE FOR LITHUANIA

Senator **McClure**. And, that is a tremendously challenging goal. But, that's an inexorable fact of growth.

Let me switch for a moment and just a moment, because I don't want to over stress. Lithuania is trying to gain independence, has declared that independence, and done so eloquently and I think without exacerbating the situation inside the Soviet Union. It has been done with the admiration of the people of the United States.

The Soviet Union responded immediately by threatening economic boycott and blockade primarily in energy, because the Lithuanian economy is 97 percent dependent upon Soviet supplies of energy.

Two things arise out of that that I think are pertinent to this hearing. One is to recognize that energy blockades are weapons of choice, whether it's in 1973 in the Middle East, perhaps again in the Middle East in the immediate future. But, certainly we have demonstrated, and the Soviets have demonstrated, that that is an easy one to apply and a dramatic one. And, therefore, they chose it.

I think that the Prime Minister of Lithuania when she was visiting here suggested in one of her comments that the United States might well try to assist, or their friends in Europe might well try to assist, by seeing that they get energy supplies elsewhere.

Has there been any discussion in the administration about attempting to alleviate their situation by making energy supplies more directly available to Lithuania?

Admiral WATKINS. I am on very tenuous grounds, Senator McClure. I have not been involved in those kinds of discussions.

We have indicated that we stand ready to have those kinds of discussions, but I have to really defer to others in the administration that have the responsibility and accountability for those kinds of things, primarily in this case the Secretary of State.

And, it's so integrally involved with the administration's foreign policy in dealing with these issues right now that I could not answer that. I am totally out of school.

PURCHASING ENRICHED URANIUM FROM THE U.S.S.R.

Senator MCCLURE. I'm not sure it's wise or not. I'm just curious.

And, finally, Mr. Chairman, one which I might indicate that I am greatly skeptical about. And, I think you would have a difficult time persuading me it's the correct thing to do, but maybe you can.

And, that's with respect to what I understand are certain initiatives for the Department of Energy to buy enriched uranium from the Soviet Union. It seems to me if we are trying to reduce our reliance on imported sources we shouldn't voluntarily enhance the purchases from foreign sources.

And, it seems to me if we are trying to deal with energy security, we shouldn't solve that by saying, "Well, Gorby is a good guy. We feel he will send us whatever we need."

Admiral WATKINS. Let me just say, Senator McClure, no decision has been made on that. The Soviets have proposed a discussion on an arrangement where the Department of Energy would purchase the enriched uranium for commercial use instead of our commercial buyers, who are doing it now.

Ten percent of enriched uranium coming into this country is from the Soviet Union today, used in our commercial powerplants. It is going up.

They are selling it at about $60 a SWU. And, at that particular rate, there is no bar. It's just open market.

Senator MCCLURE. Unless, indeed, they are dumping.

Admiral WATKINS. Which we have discussed with them. And, we believe, with the excess uranium resource that they have, this is certainly a possibility.

And, so they have proposed this. It is being worked on by an interagency study group. I have no idea of what the efficacy of such a program is. It's the kind of thing that I believe we would clearly discuss here on Capitol Hill before moving on any result of that.

But, it is going through with the options to be responsive to a proposal that has been made to us. It has some economic advantages. It obviously has some other very significant disadvantages along the lines you have suggested.

Senator McClure. I have talked to Secretary Young at some length about that today, and frankly I don't know how you make it work unless you do what every good cartel in the world tries to do, and that's allocate market share on totally arbitrary present terms so they can measure whether there is any increase.

I simply don't understand how we can limit Soviet sales in this country by arranging a cartel that is as leaky as that one would be.

Admiral Watkins. I am glad to have your input, Senator. But, I can assure you we are quite a ways off from any decisions on that.

Senator McClure. As I say, I'm skeptical. I doubt you can convince me it's good policy. You are welcome to try if that's what the administration——

Admiral Watkins. Well, obviously I don't want to do anything that would upset our own uranium enrichment enterprise projections. As you know, we are trying to transform our Government-owned facilities to private-owned facilities through a Government operation.

The Senate has approved that bill. We are working with the House. We are working very hard on that.

We believe we can bring the AULIS technology to fruition in 1997 with the technology, and that would bring us down to around $50 or $60 a SWU, which would be very competitive, even at a dumping rate.

Senator McClure. Well if they are truly dumping, all they have to do is lower the rate again. If I understand correctly, we are meeting the market with the exception of the Soviet Union today.

And, even while we are doing that we have lost market share from nearly 100 percent to about 50 percent. And, the Soviets seem bent on taking more of that market.

Admiral Watkins. Well, I can assure you that this is an issue that the State Department is well aware of and in other kinds of negotiations as the kind of thing that we would bring to their attention and say that, if we are coming into the civilized world of open markets and free marketplace, then this is the kind of thing that we can't tolerate.

So, I hope that it will pop into view in other negotiations and we will get back to a more uniform international rate at about $118 a SWU.

Senator McClure. Well, I've heard it suggested that one of the things we ought to be doing and one of the reasons we ought to buy from the Soviet Union is because they need dollars so they can buy other things from us.

Now, I will tell you, I will be screaming from the top of the nearest monument if that, indeed, is where this administration or anyone else who says the best way to help the Soviet Union is to become more dependent upon their energy. That strikes me as being one of the most nonsensical ideas I've heard expressed around here. And, this place is full of nonsensical ideas.

Thank you.

Chairman Byrd. Senator Reid?

Senator Reid. Mr. Chairman, my curiosity has gotten the best of me. What is a SWU?

Admiral Watkins. A SWU is a separative work unit. And, this is the international mechanism to price out uranium at various forms of enrichment.

It takes so much energy to go to 2½ percent enrichment, to 3 percent enrichment, to 4 percent enrichment, to 5 percent enrichment. So, this is a mechanism to deal with that set of issues.

So, I can only explain it that way. Does anyone here have any——

PUBLIC HEARING COMMENTS—YUCCA MOUNTAIN

Senator Reid. That's good enough. That's good enough. Mr. Secretary, welcome to the subcommittee. I will bet you could never guess what subject I would like to talk to you about.

Admiral Watkins. The Snake River Alliance? [Laughter.]

Senator Reid. No; Mr. Secretary, Secretary Lujan indicated that he felt the Endangered Species Act should be changed.

Based upon that, and recognizing that in the near future it probably won't be changed, I would like today to talk to you about some of the things that are going on in the Department of Energy that relates to endangered species.

Prior to doing that, however, an environmental assessment of Yucca Mountain is lacking at this stage. And, based upon that, you can recall that there were public hearings in March 1989 in Nevada relating to Yucca Mountain. And, this was to take public responses, public questions, as it relates to Yucca Mountain.

We were told at that time that the Department would respond in 6 to 8 months to those inquires that were made. Now, we have gone almost 16 months and there has been no response from the Department of Energy.

Do you have an idea of when we can hear from the Department of Energy on those public hearings that were held and the public inquiries that were made at that time?

Admiral Watkins. Well, I am not equipped, Senator Reid, today. I did not come prepared to deal with the very complex matrix of line items that we have, probably on the order of 30 different events, all integrated, on our efforts to carry out the mandate of Congress, to commence the characterization of the site to see if it's advantageous for a repository.

I do know that certain hearings were held. And, the comments are always listened to and, in fact, put into our thinking.

We have published a plan called revision zero. It is the plan that is out on the street today, the very first integrated plan that we've ever had in the Department.

And, in about 1 month, on July 15 nominally, we will issue revision one of the plan for the characterization of the site. And, in it we will have all of the elements of environmental impact studies, their timing, when they have to be conducted, when all the issues have to be in, external oversights, State involvement, and so forth are all contained in there.

I just don't have the answer to that particular question at my fingertips. I certainly can provide that for the record.

Senator **Reid**. I would appreciate if you would do that and also to my office so they will track together.

[The information follows:]

Status of Comments Received at March 1989 Public Hearings in Nevada on the Yucca Mountain Site

We share your concern over the time it is taking for the Department to issue responses to the comments received on the Site Characterization Plan [SCP]. Shortly after my arrival at the Department of Energy [DOE], I directed a complete reassessment of the Civilian Radioactive Waste Management Program including its costs and schedule baselines. This reevaluation took several months and required the temporary redirection of substantial program resources to complete. That reassessment has been completed and the new Director of the Office of Civilian Radioactive Waste Management, Dr. John Bartlett, has directed that preparation of responses to the comments be given a higher priority within the program as a whole. It is anticipated that we will issue the responses to the comments received on the SCP within two months.

I would like to point out, however, that, even though a formal response document has not been issued, the program has already incorporated into its plans some of the suggestions and comments received on the SCP. For example, several commenters, including the State of Nevada, urged DOE to focus its early scientific investigations of Yucca Mountain on potential disqualifying factors. This has been done. Another example is analyzing the most appropriate way to assess the Calico-Hills geologic unit without destroying its waste management capability.

ENDANGERED SPECIES

Senator **Reid**. It is also my understanding that the Department expects to update its documents and eliminate some discrepancies pertaining to the environmental assessment that was made a number of years ago. And, as part of that, I would direct your attention to some endangered species that have been identified.

DOE's current environmental assessment was published about 4 years ago, in 1986 some time. And, in the past 4 years, there have been significant questions raised relating to certain species.

And, I would name those species at this time, Admiral: Desert tortoise, black wooly pod, Mojave fishhook cactus, ash meadow pupfish, devil's hole pupfish, Ripley's biscuit trout, bullfrog dill, sweetpea, and the funeral milk vetch.

We are wondering when the Department of Energy is going to update their environmental impact statement and what will be done relating to these species that have been already identified as being endangered, threatened, or in some category within the Endangered Species Act?

Admiral **Watkins**. Mr. Chairman, I have with me today the Director of the Civilian Radioactive Waste Management Program, Dr. John Bartlett, who was confirmed here by the Congress not long ago. And, I would like to turn over the answer of that particular, very detailed question, to him at this time to answer, Senator Reid.

Senator **Reid**. Mr. Bartlett.

Chairman **Byrd**. Director Bartlett, proceed.

Mr. **Bartlett**. Thank you, Mr. Chairman. We have in progress an update of the environmental impact assessment plan for the site which will be issued within a few months basically. And, that will include activities such as you have been describing.

Senator **Reid**. Will it include these specific species?

Mr. **Bartlett**. Frankly, I'm not sure specifically but I will be glad to identify which ones will be included.

Senator **Reid**. We in the West are now learning about endangered species. We've had significant work done on the desert tortoise in southern Nevada in recent months, and it's one of the species that we are concerned about that we know exists in Yucca Mountain. And, I have identified the others.

And, to make this environmental impact statement complete, we need to know about the endangered species. It has held up other programs, and with a little bit of luck maybe it will hold up Yucca Mountain.

Admiral **Watkins**. Well, Senator Reid, I do know that the desert tortoise was addressed very significantly, and we were given a clean bill of health on the desert tortoise for the characterization work. So, I think that is one of the endangered species about which I have some personal knowledge.

The others I'm not sure. But, clearly in the environmental impact statement update, the environmental assessment update, we have to address those issues.

If we can get with your staff, specifically, it might enhance our research to determine whether or not we have fully covered this in the updated EA coming up.

Senator **Reid**. That would be fine. The only reason that I remention the desert tortoise is, at the time your agency did the work on the desert tortoise, it had not yet been listed by the Fish and Wildlife Service.

So, it throws that into an entirely different category because if, for example, the tortoise hadn't been listed we wouldn't have had all the problems in southern Nevada. The problems did not start until the listing took place.

But, we would be happy to supply that information to Director Bartlett and hopefully come up with something as quickly as possible.

[The information follows:]

PROTECTION OF ENDANGERED SPECIES DURING SITE CHARACTERIZATION

The Department of Energy (DOE) is fulfilling its responsibilities under the Endangered Species Act (ESA) (Public Law 93-205) and has taken a number of steps to ensure that site characterization at Yucca Mountain will be conducted in full compliance with all applicable requirements of the ESA and its implementing regulations.

As required by the Nuclear Waste Policy Act (NWPA) (Public Law No. 97-425 [1983], as amended by Public Law 100-203 [1987]), DOE issued an environmental assessment (EA) of the probable impacts of site characterization activities. Despite findings in the EA that no significant adverse environmental impacts were expected, DOE is protecting endangered species through consultations with the U.S. Fish and Wildlife Service (FWS) and through ongoing monitoring and mitigation activities.

DOE issued an Environmental Monitoring and Mitigation Plan (EMMP) that describes the procedures that DOE is using to ensure that the environment is protected during site characterization. To implement the EMMP, DOE conducts pre-activity surveys, which include a biological reconnaissance. If any protected species are found, DOE will not conduct the planned activity without appropriate mitigation measures.

DOE has been involved in periodic consultations with the FWS to identify the endangered or threatened species that may inhabit the project area, and to ensure that if such species are discovered, adverse impacts will be mitigated or avoided. In a January 15, 1988, letter to FWS, DOE requested information on the presence of any listed species at the Yucca Mountain site. In its February 23, 1988, response to DOE's inquiry, FWS indicated that no listed or proposed threatened or endangered species exist in the project area.

On August 4, 1989, FWS listed the desert tortoise (*Gopherus agassizii*) as an endangered species under the emergency provisions of ESA. As a result of this action, DOE requested formal consultation with FWS on October 10, 1989, and submitted a Biological Assessment. In a February 9, 1990, letter, FWS issued its official Biological Opinion that proposed site characterization activities "are not likely to jeopardize the continued existence of the listed endangered desert tortoise."

DOE intends to comply fully with the measures specified by FWS in its Biological Opinion to minimize impacts on the desert tortoise, and will continue to consult with FWS to ensure that compliance with ESA is maintained throughout the site characterization process. If any additional threatened or endangered species are found at the site, DOE will take similar steps to ensure their protection.

FINANCIAL ASSISTANCE TO NEVADA

Senator REID. Mr. Chairman, I have another couple of questions that I would like to go into and the Admiral can decide whether Director Bartlett or he would like to answer the question.

And, that, Admiral, relates to the lack of confidence. And, certainly I'm not here to create any argumentative setting, because that was established long ago. I'm here on a fact-finding venture this afternoon.

What I'm concerned about is that we have in this year's budget proposal, not in this subcommittee but in one of the others of this committee, money that is under the terms of the 1986 act to provide the State and local governments with the ability to work with the Department of Energy, or against the DOE, if it's in the best interest of the State, to work against the Department of Energy for scientific information, and we simply have not had that money delivered to Nevada.

As you will recall, last year we had some difficulty because the money was fenced and that has created a real difficult situation in the State of Nevada. In fact, it's contemplated that the agency may have to close if the State money is fenced this year.

What is the position of the Department this year as regards this money that is requested under the act?

Admiral WATKINS. Well, it seems awfully difficult for us, Senator Reid, to supply moneys when Nevada denies us the permits and we have to bring a suit in the Federal District Court—*United States* v. *Nevada*. The first air permit that we have been asking for for several years was rejected by a law passed by the State to oppose the congressional mandate to do the characterization out there.

It seems awkward for us to supply moneys under those circumstances until such time as we can clarify that through the court.

We also have the *Nevada* v. *Watkins* case in the ninth circuit, which now seems to be the premier court case, that will have to be conducted before the U.S. district court will act on our request for permits.

Our belief is that we have to press on with those court cases to the extent we can, assuming we can keep a reasonably cool head in the interim period, and make a determination whether or not we are going to be able to get on with the characterization, as directed by the Congress of the United States. And, we will probably have to go through the courts to whatever level is necessary to determine it.

At that point, the dollars will move if, in fact, we are successful. If we aren't successful, then obviously there is no use in putting those dollars out there to be misspent.

So, I believe that's where we are.

Senator REID. OK. But, Admiral, the act is quite clear that the State of Nevada is to have money to work on the project. And, we have a situation here where the State of Nevada is simply following a law that was passed by the State legislature, by the assembly and the Senate, signed by the Governor, that, in effect, outlawed a nuclear waste repository in the State of Nevada.

Now, there is no question but that the people who are working on this for the State of Nevada are following the law. And, even if this law had not been passed, it would seem to me that the Department of Energy is obligated to make those funds available to the State and local government.

Certainly, the local governments had nothing to do with passing that law in the State. And, they certainly should have their moneys to do whatever work they feel necessary, planning, implementing, whatever they feel is appropriate based on the fact that this characterization is being attempted.

Admiral WATKINS. Senator Reid, if we could get a list from the Governor for the State of Nevada that said very specifically that he needed these moneys in a constructive effort to satisfy certain needs at this time to make decisions, without all of the rhetoric against me, including a request to make sure that I inform the Governor prior to any time I plan to enter the State, maybe we can do something.

But, I have a variety of points that maybe I have to make here. It doesn't make it very attractive for me to be a cooperative player in the game. I really believe I have tried to do that. The antagonism is so significant, however, that I can get nowhere but get attacked and vilified out there in Nevada by the local press, by everyone.

And, I believe it's time—if you are serious about getting on with the real work that has to be done, that's a different matter. And, I believe that that has to be a negotiated position between the Governor and myself. And, I don't see how it can be done now in light of the contentious nature of the atmosphere that I believe has been generated by the State in defiance of the Congress of the United States.

LEGAL SITUATION IN NEVADA

Senator REID. Admiral, I would respond by saying that all we are asking the Federal Government to do—and this certainly preceded your taking your position as head of the Department of Energy, but all we ask the Federal government to do, and all we've ever asked it to do, is follow the law.

And, we have felt that the Department of Energy has not followed the law.

Admiral **Watkins**. How could I follow the law, Senator Reid, when you have defied the law and said that there is no law, that this is simply not applicable and you have rejected the permits on the basis of your decision that the State law preempts the Federal law?

I don't understand. What am I doing to violate the law? What law?

Senator **Reid**. But, Mr. Secretary, the law of 1982 as amended in 1986. The Department of Energy simply did not follow that law. And, the record is replete with instances that they didn't follow the law.

However, without you and I arguing with each other here and now, and I'm certain that's not what we are doing. We are trying to get to the bottom and present some facts.

But, let's assume that what you have said is basically true, that the State has passed a law that has caused the Department of Energy some concern. And, there is no question that that's the case. But, under the law, as it exists even in 1986, the money supplied to State and local governments was not to be based on the cooperation of the State. That was to be provided so that the State would have some resources to fight the Federal Government, to respond to the Federal Government as to what they were doing.

And, I would remind you, Mr. Secretary, that we live in a form of government that is a central whole divided among self-governing parts. One of those self-governing parts is the State of Nevada.

And, certainly if it takes courts to decide whether or not they have the authority to pass that law, that's one thing. But, certainly the State and local governments should be provided with that money as indicated in the law of 1986.

The law was not passed in 1986 even though a number of us feel it was jammed down our throat. The language of the law is quite clear that the money was not to come based upon the good auspices of the State of Nevada. It was to provide the State of Nevada with the authority to fight the federal government.

And, I use the word "fight" in the sense to respond to the Federal government. That would probably be a better word.

Admiral **Watkins**. Well, we certainly agree that money should be made available. I have knocked myself out, Senator Reid, to provide dollars in our budget for the State to bring in their scientists, completely independent of ours, to oversee what we are doing, to do everything possible to air this issue fully, as we go through the research program necessary to determine whether this site is suitable for a long-term repository.

There have already been large numbers of dollars provided to Nevada. The Congress last year, sponsored by the Senate Energy and Natural Resources Committee, informed me very clearly that from now on they would appropriate only certain dollars and others would be withheld pending a more suitable relationship between the Department of Energy and Nevada in getting on with the characterization that was intended by the congressional act.

And, so it seems to me that I have clear guidance on two occasions from the Congress, one to get on with the characterization; and, two, to withhold funds unless I deem that there has been a good relationship with the State to try to get on and do this job in a professional fashion.

So, I really don't believe that you have the most updated version of the intent of Congress, as I read it. If that's wrong, then I would hope the Congress would inform me that I should turn over these dollars to the State and they would rescind that portion of the bill last year which said I should withhold those dollars.

DOE'S RELATIONS WITH NEVADA

Senator **Reid**. Mr. Chairman, one last comment or question. Admiral, first of all, the action of the Energy Subcommittee does not supersede the law that was passed in 1986.

I would further respond that we always had the hope, and we felt the assurance from you, when you became the Secretary of the Department of Energy in the meetings that we held with you initially that you would be an advocate for those moneys to give the State of Nevada the ability to respond to what was going on in the Federal government. And, that hasn't been forthcoming and you have not been the advocate for the State of Nevada that we felt that you would be and you should be as Secretary of the Department of Energy.

The State of Nevada has a little over 1 million people in it. And, we are fighting the federal government and our small numbers make it very, very tough.

I think this sets an example for the rest of the country what the Federal Government can do if they want to brutalize a State.

Admiral **Watkins**. I certainly have no intention of brutalizing the State. I am trying to do everything that I can that is reasonable.

In my opinion, I don't believe that Congress is appropriating moneys to pay the Nevada lawyers to sue the U.S. Government. I cannot believe that is the intent of Congress.

I cannot believe that it's the intent of Congress to pay for dissident actions, unsupported by scientific findings, while I cannot conduct scientific investigation because I can't get the first air permit.

So, it seems to me that there has to be a meeting of the minds here between what we are talking about. I want to give those funds to the State of Nevada, if we can have a constructive alliance to get on with the tough scientific work at hand here.

But, I can't make a move until such time as I have the first permit—that's called an air permit—that you are giving out daily to most other people around there without any opposition, but to the Federal Government, you preferentially denied me all of these particular privileges.

So, I really frankly think we are at an impasse, Senator Reid, and we will have to let the court work on it or I will have to ask for legislative relief here on the Hill. The Congress will have to come to grips with whether or not they are serious about their decision of a few years ago and help me out on this, because we are clearly reaching that impasse.

We have got a very important issue in the United States that has to be faced. And, I'm sorry I wasn't here to make the decision. I recognize the problems in the past, but I'm trying to carry out my responsibilities, which I believe I have, at the Federal level.

Chairman BYRD. Senator Reid, anything further?

Senator REID. I would like to get the last word in. I am really being facetious in that regard.

Thank you very much for your responses, Admiral.

Chairman BYRD. Senator Domenici?

WASTE ISOLATION PILOT PLANT

Senator DOMENICI. Mr. Chairman, let me say that I will try very hard, because it is getting late, to be brief. I do have a couple of points of inquiry that are a little different than what we have had, and I hope they will be of interest.

Mr. Secretary, the first issue is not unrelated to that which Senator Reid has raised. I only ask one question and it is by way of seeking information. I understand that you are moving ahead in the WIPP area, the waste isolation pilot project, that you are doing some final planning, and may be in a position soon to recommend and/or announce further actions on your part perhaps with some deadlines and the like.

I'm just asking as a Senator from New Mexico if I could be assured of having an opportunity to talk about those with you at your earliest convenience?

Admiral WATKINS. Yes, sir.

IMPACT OF OIL IMPORTS

Senator DOMENICI. We do have an opportunity in two other committees to interrogate the Secretary on this issue, both in the Energy and Natural Resources Committee and in the Appropriations Subcommittee on Energy and Water Development, wherein the money and jurisdiction for this program lies.

I thank you, and I will ask a couple of other questions.

Mr. Secretary, one time you mentioned—I believe it was publicly—that you were enthused and impressed with your responsibility to develop late this year a national energy policy. However complex you found it, you indicated that it was a matter of such significance that you were very hopeful that you might even convince the President to become the energy President. I believe I heard you say that.

Could I ask you, Mr. Secretary, when you get that final energy plan ready will it be of significant concern to you that we import such tremendous quantities of crude oil and related products? Is that one of the reasons that we have an energy problem in the United States?

Admiral WATKINS. It's one reason. It certainly will be addressed and it was tasked to us by the President to do everything possible to wean us away from unstable supplies of oil.

Senator DOMENICI. So, you do not agree with those, whomever they are, who think that that it is not a serious problem that $44 to $48 billion of our balance of trade is oil and related products, and it is growing at a very rapid pace?

Admiral WATKINS. I believe it's a serious problem.

ENHANCED OIL RECOVERY

Senator **DOMENICI**. Now, Mr. Secretary, as part of that program, you have shared with our distinguished chairman some advanced ideas. Could I talk about one with you for the record?

That issue is oil production in the United States. You mentioned that we have frequently talked long term, and you are going to reverse that a bit and talk about a short-term problem. I think you called it enhanced oil recovery.

Admiral **WATKINS**. Yes, sir.

Senator **DOMENICI**. Now, as I understand it, Mr. Secretary, in the United States of America, when we drill a conventional oil well and the oil comes out and we deliver it, for the most part we leave more in the ground than we get out. I guess what I'm hearing is that, as an average, there is between 60 and 70 percent of the pool still in the ground.

Admiral **WATKINS**. I think it's safe to say that about two-thirds remains.

Senator **DOMENICI**. Now, are we then talking about this vast inventory of already discovered oil underneath existing wells, be they large wells or small wells, that you are trying to enhance the recovery of by certain technology?

Admiral **WATKINS**. Yes, sir; that is correct.

Senator **DOMENICI**. Might I depart from an appropriations issue and ask: Is it fair to say that as part of your energy approach you will be looking at whether or not enhanced oil recovery is entitled to some kind of a tax incentive if it is, indeed, economic and within the contemplation of good budgeting?

Admiral **WATKINS**. We will have an entire section that addresses the economic aspects of this strategy including such things as subsidies, taxes, whatever. We already have on the Hill, as you know, subsidies for such things as ethanol, which recently the Treasury Department has extended to ETBE, a derivative of that.

All of those will be reviewed. The President has a tax incentive bill here on the Hill, primarily to enhance oil recovery for independent producers. There seems to be kind of a ho-hum response up here to those.

And, therefore, I think until we have an energy strategy where we can lay out all of the various aspects that are necessary to drive the program in a level playing field direction for the Nation, I don't think we are going to get anywhere.

But, in the meantime we've got to do the research. And, I'm putting my weapons laboratories at Los Alamos, Sandia, and at Lawrence Livermore into the enhanced oil recovery business. They are the very best minds we have, as well as our nondefense laboratories, to do everything possible to give me the kinds of consortia I need out there in working with the private industry to bring this together.

We have established such a partnership and we have put money into it. We are very excited about it, because for the first time we are bringing some of our best scientific minds in the Nation into a cooperative effort with the research institutes and with the industry to really take a look at this and see how best we can use three dimensional computers, for example, the new thinking computers, to see if we can characterize the field, to be able to spot them and go after them with horizontal drilling.

And, certainly we do not want to throw away the independents, the 6,000 wells today that give us more than one-half of our oil in the country, because of extreme environmental positions or others that might be taken against them, because if we ever shut them down we lose them forever.

So, we have a major near-term effort to make sure we don't close options for the country to extract oil at competitive prices from existing fields. And, that's what we are trying to do and do it on an accelerated basis—to see just what our resources really are, so as we develop the national energy strategy and it's follow-on every other year, when we come to Congress we have an update of that, we will be able to watch this over time and see if we can't maintain our oil sufficiently long enough and cut those imports down until we can find alternatives under such programs as the Clean Air Act.

Senator DOMENICI. Mr. Secretary, I take it that you do support the continuation then of the oil recovery technology partnership approach which we are funding this year, and which yielded in the Advanced Recovery Week a discussion of one of your major projects in the crosswell seismic area in California where heavy oil was found by new seismic devices that were developed by the private sector and Los Alamos National Laboratory?

Admiral WATKINS. That's the whole idea, Senator Domenici. And, I think there is a lot more to be done. We just have not focused our national laboratories to the extent necessary to help industry out.

I think we can do that, particularly, as I mentioned, as computers become so advanced and sophisticated and our ability to look into the field becomes so much more real. We can really find these spots and go after the oil.

ENHANCED OIL RECOVERY BUDGET

Senator DOMENICI. Mr. Secretary, very specifically, do I understand that this program had $1.6 million in it in fiscal year 1990, the one we are currently talking about? I take it that you support continuation of that program or increasing it, depending upon what this committee sees as its available resources?

Admiral WATKINS. We have increased it in here from $1.6 to $1.8 million in fiscal year 1991. So, that is a modest increase, but we have programs connected with that. It's just not throwing dollars at it.

We have very specific programs with very specific companies including Texaco, Chevron, Los Alamos, Sandia, a seismic receiver project, a whole host of things in cooperation in this new national lab partnership with which I think you would be very pleased. Maybe we could come up and brief you in more detail on that.

TECHNOLOGY TRANSFER

Senator DOMENICI. I am fully aware of the matter, Mr. Secretary. I thank you for your offer.

I think Assistant Secretary Gentile has been doing an excellent job and briefed us on it in the very recent past.

One last question: Do I understand correctly that you have already decided that part of your national energy policy will be to use the Department of Energy's national laboratories to make America more competitive by helping American industry through consortia and otherwise in areas where we have the scientific expertise and where we know that can be helpful to American industry?

Admiral WATKINS. Yes, sir; that is correct. It is called technology transfer and will be a major section of our report and will provide, in my opinion, the economic underpinnings necessary to carry out the strategy itself without burdening the Nation with a lot of increased costs.

I think so much of this we can do ourselves by just taking advantage of our own incredible research and commercialize it in our own industry before it goes offshore, only to be sold back to us in the form of rigs, in the form of optical equipment, and all the other things that other nations seem to be able to field faster than we can on our own technology.

And, this is very critical to the Nation. I think it is the heart of competitiveness, along with education. And, the two go hand in hand.

And, you will find it right at the heart of our energy strategy.

Senator DOMENICI. My last question has to do with the 1989 National Competitiveness Technology Transfer Act, of which I think you are aware. Senator Bingaman and I finally passed it after years of effort. Senator McClure, you helped us, and we are most grateful.

I take it that this act has been helpful in such programs as the consortia that you intend to establish in specialty metal processing.

Could you explain for the subcommittee how you do that kind of consortia work on something like specialty metals? And, if that's too specific, let me just leave it as a question, and you can answer it for the record.

Would you rather do that?

METALS INITIATIVE

Admiral WATKINS. Yes; if I could. I am stumbling to find my particular item on metals, because we have a very, very significant matching underway in that area.

Probably one of the more significant projects we have in that area would be with the American Iron and Steel Institute. This is the one that could move us into more competitive steel production capability again by going to a single step process in the direct production of steel.

We have already put $27 million into the metals initiative program with industry, and we now are expanding it in fiscal year 1991 by $8.5 million more. And, we have very specific phases for projects, phases one, two, and three, that could go on through fiscal year 1994.

It's a very aggressive program, very much supported by the steel industry, and we are very hopeful that various techniques such as superplastic steels, spray casting, and direct steelmaking, in cooperation with North Star Steel, Caterpillar, Ladish Corp., and many others, will have a high payoff.

So, this is what we do when we are given the authority by the Congress and the moneys to do this kind of thing. I think we can move mountains in this country.

And, I don't think we've done enough of it. We haven't involved our labs enough in this kind of work. And, I think you are going to see us in this time of limited threat of global conflict be able to dedicate our lab science intellect to these kinds of approaches.

So, we are very excited about this particular initiative. It may get us to a more competitive situation again for producing steel.

Senator DOMENICI. I thank you, Mr. Secretary. I want to commend you, Mr. Secretary, for seeing the tremendous potential of the science that you have within your jurisdiction. As you know, you control more of the great scientists in the United States than any other institution, in fact, any in the world. And, I compliment you for trying to use them to enhance America's productivity.

Admiral WATKINS. Thank you, sir.

Senator DOMENICI. Thank you, Mr. Chairman.

Chairman BYRD. Would you elaborate for the record on this last matter that you discussed with Senator Domenici pertaining to steel?

[The information follows:]

STATUS OF METALS INITIATIVE

The Metals Initiative was initiated in 1988, as a follow-on program to the "Steel Initiative" which had been legislated previously. Its purpose is to increase energy efficiency and enhance industrial competitiveness within the primary metals industry, by establishing public-private sector research and development partnerships to undertake scientific research and development. This is being accomplished by a collaborative research and development effort which is closely coordinated with the industry. The Program is becoming recognized throughout the primary metals industry as a very effective means for organizing and conducting research and development.

Appropriations history—Steel initiative/metals initiative

Fiscal year:	
1986	$7,134,000
1987	2,000,000
1988	4,000,000
1989	
1990	16,900,000
Total	30,034,000

The following funds have been obligated by DOE:

$2,184,000 for electromagnetic casting research at Argonne National Laboratory. This project has been terminated.

$2,206,000 for R&D on superplastic steels at Lawrence Livermore National Laboratory. The industrial participants, North Star Steel, Caterpillar and Ladish Company, Inc. provided technical and financial assistance to the recently completed Phase I, and have supported the decision to initiate Phase IIA.

$5,336,000 for R&D on near net shape spray casting of low carbon steel sheets at Idaho National Engineering Laboratory; the project also involves MIT, Oak Ridge National Laboratory and 8 industrial companies.

$17,254,000 for R&D on direct steelmaking with the American Iron and Steel Institute (AISI). The AISI member companies are the cost-sharing participants.

$910,000 has been identified for obligation to initiate a project on titanium diboride/graphite cathodes for the Hall-Heroult alumina reduction cell.

$1,891,000 has been identified for obligation to initiate a project on near net shape casting of steel sheet and strip.

Thus the total funds obligated and identified for obligation are $29,781,000.

FISCAL YEAR 1991 BUDGET

$8,600,000 has been requested in the fiscal year 1991 budget. These funds will cover completion of Phase I of the spray casting project and continuation of the direct steelmaking project.

	Fiscal year—	
	1990	1991
Direct steelmaking	$9,254,000	$6,000,000
Spray forming, phase I	3,886,000	565,000
Superplastic, phase IIA	706,000	....
Stable cathodes	910,000	....
Thin strip steel casting	1,891,000	....
Balance	253,000	[1] 2,035.000
Total	16,900,000	8,600,000

[1] $2,035,000 will be used for either initiation of Phase II spray forming, or Phase IIB, Superplastic Steel based on consultation with industry, or continuation of the strip casting and wettable cathode projects initiated with fiscal year 1990 funds.

PROJECT STATUS

Superplastic Steel Processing.—Phase I was completed during fiscal year 1990. The concept of producing ultrahigh carbon steel which exhibits superplastic behavior was demonstrated on a pilot scale. The industrial cost sharing participants supported the decision to initiate Phase IIA. The objectives of this phase are to (1) establish the variables that will enable large-scale production and processing, (2) enhance superplastic properties of strain rate and flow stress, and (3) demonstrate the ability to form superplastically a commercial part.

Spray Forming Steel.—The objectives of Phase I of this project include the bench-scale development and comparative evaluation of three different spray forming concepts, and the conceptual design of a pilot-scale spray forming system for the production of low carbon steel sheet and strip. Phase I efforts continue at the three laboratories—Idaho National Engineering Laboratory, Oak Ridge National Laboratory, and Massachusetts Institute of Technology—to develop nozzles capable of controlled spray atomization and subsequent consolidation onto a solid substrate to form a steel sheet. MIT has successfully sprayed steel; the other laboratories have sprayed low melting point metals, and it is anticipated that spraying of steel will commence shortly. Steel sheet produced by three different nozzles will be evaluated by the industrial users prior to making a decision regarding Phase II.

Direct Steelmaking.—The objective of this research project is the development of a coal-based, cokeless, continuous steelmaking process. Pilot plant construction has recently been completed, and initial startup was successful. Fifteen months of experimentation are planned. Bench scale studies of reaction kinetics and modeling are progressing at two universities. Plant scale trials of post combustion are being conducted.

Evaluation of Titanium Diboride/Graphite Cathode Components and Engineering Packages—(Stable Cathodes).—Negotiations are underway with the prime contractor to sign a cooperative agreement prior to initiating Phase I research efforts.

Thin Strip Steel Casting.—DOE has completed the technical evaluation and a decision to begin negotiations leading to an award of a cooperative agreement for conducting this research is expected shortly.

NEW PROPOSALS

Under Review.—Three unsolicited proposals have been received and are undergoing review.

Anticipated.—Testimony before the House Subcommittee on Interior and Related Agencies by AISI indicated their intention to submit a proposal on intelligent processing of steel. In addition, an aluminum producer has advised DOE that it is submitting an unsolicited proposal.

COMPETITIVENESS RESEARCH PROJECTS

Admiral **Watkins**. Yes, sir, I will.

Chairman **Byrd**. I would be very interested. And, I'm sure other members of the subcommittee would like to know more about that.

Admiral **Watkins**. Yes, sir; I would be pleased to do that, Mr. Chairman.

Chairman **Byrd**. With regard to research projects designed to advance the competitiveness of our domestic steel and aluminum industry, I believe that a very positive example of the cooperation between the Federal government and industry is the cost-shared clean coal technology demonstration project.

In your position as the manager of a very large and complex organization, I wonder if you would conclude that precise and efficient management information and control systems can be every bit as important as the actual hardware needed to accomplish a specific task?

Admiral **Watkins**. I'm not sure I understand, Mr. Chairman, the question. Maybe you could elaborate on it a little more and give me a better feel. I'm not really sure I am going to home in on the right answer.

Chairman **Byrd**. I'm not sure I have done very well in presenting the subject matter.

I hope to provide the Department with an opportunity to collaborate with Weirton Steel and other companies, on a novel integrated management information system for the steel industry. That was why I asked the question as I did.

Admiral **Watkins**. Would it be satisfactory for me to get with staff on that and get right back to you with an answer for the record, Mr. Chairman?

[The information follows:]

Collaboration With Weirton Steel

Weirton Steel Corporation, West Virginia University, and Westinghouse Electric Company jointly submitted an unsolicited proposal on September 29, 1989, for an "Integrated Manufacturing Information System," seeking financial support under the Steel and Aluminum Energy Conservation and Industrial Competitiveness Act of 1988 (Public Law 100-680). DOE rejected the proposal on the basis that it did not meet the purposes of the Act. DOE agrees that implementation of the proposed technology would contribute to energy efficiency and enhance competitiveness. However, DOE concluded that the proposed project was not a program of scientific research and development, as required by the Act, but a challenging engineering task which integrates technologies already in use.

Representatives from both DOE and the proposing organizations met with the Majority Staff Member of the Senate Appropriations Subcommittee on Interior and Related Agencies to provide a briefing regarding the decision in January, 1990. No further proposal activity has taken place since that time.

ALTERNATIVE FUELS STUDY

Chairman **Byrd**. I think that is the best we can do on that question at this point.

The reason I brought it up is because of what you said about the steel in responding to Senator Domenici and that whetted my interest in knowing more about just what you were discussing.

In the Senate report accompanying the fiscal year 1989 Department of Interior and related agencies appropriations bill, this subcommittee requested that the Department prepare a report on the feasibility of producing alternative liquid fuels for the transportation sector. That study was completed this January for the Department by the National Research Council of the National Academy of Sciences.

Are you familiar with the recommendations of the report?

Admiral WATKINS. Yes, sir; I am.

Chairman BYRD. Does the Department endorse the conclusions of the report?

Admiral WATKINS. We agree with the basic findings of the study, yes, sir. We didn't receive that before we presented our fiscal year 1991 budget request. We will take it into consideration.

It happened that some of it came out right in our budget request; that is, the technology for enhanced oil production was judged to have the greatest near-term potential for liquid fuel production by the NRC study. But, also it talked about the longer-term options of liquids, coal, and oil shale, which we left at the same level that DOE had put it for years and has always been enhanced by the Congress in areas of MHD and other applications, fuel cells, and other things that are alternatives.

And, we recognize that. And, we will be able to use that certainly in our preparation of the fiscal year 1992 budget request.

I have not studied it in the context of preparing our fiscal year 1992 budget submission, but I can assure you that that will be used. I have been assured by my staff that we will take it into account.

COAL RESEARCH PRIORITIES

Chairman BYRD. Very well. You anticipated my next question.

If you are planning to increase your fiscal year 1992 request for many of these technologies, then the fiscal year 1991 budget proposals may be seriously out of sync.

I recognize that you must support the President's request. But, we both have the benefit of more current information than was available when the Department first prepared the fiscal year 1991 request last summer.

I believe it would be in everyone's best interest for the Department to indicate priority areas for additional funds if the Congress were to restore the proposed 60-percent reduction in the overall coal research program.

Could you indicate those high priority programs and projects at this time? Or, if you would prefer, we would appreciate you supplying that information for the record.

Admiral WATKINS. Certainly, for the record, we can provide you what we believe those priorities would be, Mr. Chairman. And, we will be able to do that, I think, and in a very short period of time, we can get that over here.

[The information follows:]

FISCAL YEAR 1991 PRIORITY LISTING

The following priority listing represents the DOE priorities (with adjustments) that were developed in June, 1989. The Department reserves the right to revise the priorities to reflect programmatic changes, national energy needs, etc., as they occur.

Priority 1—Increase the utilization of domestic coals in an environmentally benign manner and the availability of domestic oil supplies

Fiscal year 1991 congressional request	$202,309,000
Headquarters program direction	6,644,000
ETC program direction	31,099,000
CT&CP:	
Coal preparation	6,624,000
Flue gas cleanup	3,397,000
Gas stream cleanup	3,497,000
Waste management	1,013,000
Advanced research	841,000
AR&TD:	
Coal utilization science	1,197,000
Tech. crosscut/environmental activities	225,000
Tech. crosscut/technical and economic analyses	214,000
Combustion systems:	
AFB combustion	694,000
PFB combustion	4,392,000
Advanced combustion technology	2,091,000
Alternative fuels utilization	1,919,000
Advanced research	1,341,000
Surface coal gasification—Systems for power production	3,062,000
AE&PT:	
Geoscience and extraction research	3,520,000
University geoscience research	300,000
Surface coal gasification—Systems for coproducts production	3,198,000
Enhanced oil recovery:	
Light oil	2,244,000
Heavy oil	1,364,000

Priority 2—Fundamental research and other acid rain related programs

AR&TD:	
Exploration technology base research	$2,550,000
International program support	100,000
Coal technology export	193,000
Instrumentation and diagnostics	172,000
Bioprocessing of coal	135,000
University coal research	1,639,000
Materials	909,000
Components	1,545,000
Coal liquefaction—Advanced research	4,610,000
Surface coal gasification—Advanced research	1,554,000
Fuels cells:	
Molten carbonate systems	12,315,000
Advanced concepts	8,955,000
Heat engines:	
Gas turbines	6,966,000
Diesel engines	7,991,000

Priority 3—Coal conversion and other strategically important liquids extraction

Coal liquefaction:	
Indirect liquefaction	$5,079,000
Direct liquefaction	16,863,000
Support studies/engineering evaluations	825,000
Surface coal gasification—Systems for synthesis gas production	906,000
Oil shale:	
Oil shale technology base	6,838,000
Environmental mitigation	1,380,000
Plant and capital equipment:	
Equipment	1,727,000
Construction	3,532,000

Priority 4—Other

Environmental restoration (Rock Springs)	$503,000
AE&PT:	

Priority 4—Other—Continued

Arctic and offshore research	200,000
Supporting technology and environmental research	4,140,000
Underground coal gasification:	
Gasification technology development	3,000
Environmental and advanced research	182,000
MHD	40,300,000
Unconventional gas recovery:	
Eastern gas shales	606,000
Western tight gas sands	720,000
Enhanced oil recovery—Tar sands	1,000,000
Fuel cells:	
Advanced research	648,000
Phosphoric acid	2,000,000
Fiscal year 1990 appropriation	418,271,000

COAL RESEARCH AND DEVELOPMENT RESTORATION

Chairman **Byrd**. All right. That would be very much appreciated. I have consistently supported the restoration of funds for coal research and development.

Admiral **Watkins**. I think generally, Mr. Chairman, it comes out that you are probably right on the priorities over here. That has never been the issue with us.

The issue is trying to get 5 pounds into a 3-pound bag, as you know. And, so we have tried to put in priority where we can.

We do look at coal as not only the coal research, which I recognize we did not enhance in our fiscal year 1991 budget request over our fiscal year 1990 budget submission. But, by the same token, we do have the clean coal technology adjunct to that. And, so I try to put those in balance in the budget deliberations, as we go through.

And, we enhanced oil recovery in the near term. We did some other things—we have clearly boosted up our conservation, efficiency, and renewables. And, that was about all we could stand.

So, I think your priorities over here are about right. We will provide them with the NRC study in hand, review that and try to get a leg up, at least give you some hint of what we are looking at for fiscal year 1992, and I think that may help you over here in fiscal year 1991.

MOBILE EMISSIONS TEST LABORATORY

Chairman **Byrd**. Very well. Well, thank you for that. I intend to do whatever I can to restore the funds for coal research and development. So, whatever information you can give us as to the priorities will be helpful.

On a related matter, the Congress provided $1.2 million in your energy conservation research budget last fall to establish a mobile alternative fuels engine test laboratory at West Virginia University. As its name implies, this laboratory will provide the Department with empirical evidence regarding the performance of alternative fuels and the engines that use them under actual operating conditions.

While this particular mobile laboratory may seem like one very small project in your multibillion dollar Department, I believe that the university's potential contribution is very important to the Nation's eventual commercialization of alternative fuels.

I am proud of the work which West Virginia University is doing in this area, and in many other areas as well. I hope that in your busy schedule you will have an opportunity to follow the progress which the university is making.

Admiral **Watkins**. I will do that, Mr. Chairman. In that regard, Mr. Chairman, I see my notes here. And, I'm not sure just what we are waiting for, but we are looking for a formal proposal from the university on the additional amount of funding for the so-called university implementation program, which we have moneys budgeted for, but for which we do need proposals to put into competition with other universities.

So, I don't know if we are the ones that are behind or if the university is right now. But, certainly I will go back and see that we make a positive link with the university in both that area, as well as in the fossil energy area, to ensure that they are going to get their proposals in, because they are competitive.

And, I see no reason why they can't be competitive. So, I will take a look at that.

I have just not had time to look into the details of that before the hearing here today. But, I will go back and see if we can have a positive exchange with the university in that regard.

REDUCTIONS TO FOSSIL BUDGETS

Chairman **Byrd**. Thank you, Mr. Secretary. Also, our staff will be discussing this with your staff.

Much of what we have before us in the fossil R&D program are standard proposals of the past. For example, compared with the current appropriated levels, the request for coal liquefaction is down 69 percent. Fuel cell research is down 81 percent. Heat engine R&D is down 71 percent. Surface coal gasification is down 64 percent. Research on oil shale is down 93 percent to a mere $662,000. Many homes in the Washington suburbs cost more than you are planning to spend on oil shale development next year.

What is the origin of these and other sharp reductions? Were they proposed by the Department or is this a result of the 3-pound bag over to OMB that you were trying to get 5 pounds into?

Admiral **Watkins**. It's the result of the latter, Mr. Chairman. This is how we have looked at this in the budget process to date.

And, none of these are on our black list. We like all of them. One of the biggest problems we have is trying to find the balance on affordability.

MHD, for example, has high potential payoff, 50 to 60 percent efficiency, low emissions, projected low cost for electricity, low CO_2. But, we have a lot of technical issues that remain. Development costs are about $40 million a year. And, we have a long question of affordability in the context of competing priorities. That's just the one issue.

Fuel cells, we have other fuel cells with high potential payoff. Other fuel cells are long-range technology, about $30 million a year development.

Stretch outs have been proposed. The question of affordability for competing priorities.

The same with liquefaction. Heat engines are similar. All of these are good ideas. We do have some modest levels of effort in some of them—fuel cells, liquefaction, and heat engines to the tune of about $23.7 million in 1991, significantly smaller in totality than the fiscal year 1990 appropriation of $134 million.

And, we recognize again that we are coming in with virtually what we came in with in the fiscal year 1990 request. I do think with the NRC study this gives us at least a new base line of data from which to clean up our fiscal year 1992 submission.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. We may have additional committee questions which we will submit to you. I would appreciate your prompt response to them.

Admiral **Watkins**. Yes, sir.

Chairman **Byrd**. We very much appreciate the discussions that we have had with you this afternoon. I want to thank you for your attention to the very weighted tasks that confront you as Secretary of Energy.

For now then, we thank you, Mr. Secretary. And, we thank you, Mr. Gentile, Ms. Smedley, and Mr. Bartlett.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

CHANGES IN EASTERN EUROPE

The American public has watched with keen interest as events have unfolded in Lithuania in recent weeks. In retaliation against Lithuania's efforts to gain independence, the Soviet Union is curtailing energy supplies to the struggling republic. In light of the fact that Lithuania receives approximately 97 percent of its energy supply from the Soviet Union, this threat could serve as the death knell for Lithuanian independence.

Question: Has the Department of Energy been monitoring the situation closely over the past weeks, and have you made an assessment as to what degree petroleum resources are being withheld by the Soviets?

Answer: The Department of Energy has carefully monitored the situation in Lithuania in recent weeks. We have utilized all sources of information available to the Department in assessing this developing situation, especially as it relates to the overall Soviet energy picture. It appears that Soviet petroleum deliveries to Lithuania were substantially disrupted during the first several weeks of the embargo. However, by late June, press reports indicated that natural gas deliveries may have increased by at least 50% from the nearly total cutoff at the beginning of the embargo. Energy supplies to Lithuania now have been restored and discussions between the Lithuanians and the USSR government are continuing.

Question: Has the Administration given consideration to any assistance we might be able to offer Lithuania to ease its current energy crisis?

Answer: The Administration is concerned and is closely monitoring the events in Lithuania, including the energy situation. We are encouraged that energy supplies to Lithuania now have been restored and discussions between the Lithuanians and the USSR government are continuing.

Question: The Lithuanian situation is an excellent reminder to us of the pitfalls of over-reliance on foreign oil. U.S. petroleum imports hover around 50 percent, and are expected to go higher unless new domestic sources become available for exploration and development. Currently, domestic supplies have taken a nose dive as production in the lower 48 states continues to level off and Alaska is experiencing its first significant production drop.

Please outline what steps you are taking to ensure that strong domestic production is maintained, and that our reliance on foreign oil is kept to a minimum.

Answer: To reduce U.S. consumption of imported oil, we are examining a number of options within the context of the National Energy Strategy. The options include Federal and State incentives for domestic oil and gas production; removing statutory and regulatory barriers to increased use of natural gas; encouraging further gains in conservation and energy efficiency; pursuing cost-effective alternative fuels for transportation; and supporting research and development programs for domestic energy sources, including renewable and enhanced oil recovery techniques.

The Department's current activities include a number of programs that address our growing dependence on foreign oil. Fossil energy research and development programs contain substantial funds that are directed toward oil, gas, and coal. The oil and gas programs are designed to improve production, while the coal programs are aimed at expanding use of this abundant domestic resource within environmental constraints. Also, we have purchased as insurance against temporary oil supply disruptions a large and growing Strategic Petroleum Reserve.

Question: The world oil market is entering a new phase. Three of the most important factors that have contributed to this change are: 1) The continuing sharp fall in U.S. domestic oil production, which has dropped 1.8 million barrels per day (17%) since the beginning of 1986; 2) the political shake-up in the Soviet Union and Eastern Europe which has resulted in a drop in Soviet oil production of 0.3 to 0.4 million barrels per day in 1989 and 1990, and: 3) the continuing strength of the East Asian economies, which has translated into vigorous demand for energy and, in particular, for oil.

In light of these changes, do you believe that a serious global energy crisis may be lurking in the near future?

Answer: There is always a chance of an energy crisis, but we believe that the likelihood of a sustained, global energy crisis is small. We see a willingness among OPEC producers to meet market demand by expanding oil production, which was not present in the 1970s and early 1980s. Since reaching a peak in the $20 range early this year, world oil prices have fallen more than $6 per barrel. This oil market weakness indicates that demand may not be growing worldwide as fast as many analysts have projected and that OPEC's ability to control its members' production to prevent over-supply in the markets is limited.

Question: What steps can we take to avert a crisis?

Answer: Although it is clear that the United States in coming years will become even more dependent on foreign oil, we can lessen that dependence by making prudent use of the resources we have. Conservation and energy efficiency have high payoffs in that respect. Gaining access for environmentally responsible oil and gas exploration in our outer continental shelf and wilderness areas is another. In the event of an oil shortage such as those seen in the 1970s, we have constructed, and continue to expand, a large Strategic Petroleum Reserve.

Question: Do you believe that petroleum markets will become more vulnerable to economic and political developments as well as to physical accidents and disruptions?

Answer: During the 1990s, an increasingly large fraction of worldwide oil production will become concentrated in the Mideast, which is usually viewed as a politically unstable area. At the same time, both the international tanker fleet and the U.S. oil logistical structure is aging. Thus, one might expect to see short duration events influence markets at increasing frequencies. However, recent events have confirmed the markets' ability to respond to such disruptions. In addition, we believe that the U.S., with its large reserve of strategic supply, is well prepared.

As part of the recent Interagency study of the size of the Strategic Petroleum Reserve, a CIA assessment of the probability of a worse case disruption was prepared. This assessment combined an examination of past oil supply disruptions with current qualitative analysis of important oil market and regional trends. Based on this assessment, the agencies participating in the size study concluded that the probability of a range of worse case disruptions is very low.

Question: Do you believe that the current situation in the Soviet Union is generating uneasiness and uncertainty on the world oil market?

Answer: The current economic disorder in the Soviet Union has direct implications on Soviet energy policy. While the current situation certainly is being monitored by the international oil community, it is not accurate to characterize the world oil market as uneasy. The Soviets are highly dependent on their oil exports for hard currency; therefore, even though their oil production is declining, they have continued to maintain level of exports to Western countries of less than 2 million barrels per day. These exports have been contributing to the current abundant supplies on the market. The reduced oil production is taken from their domestic economy and soft currency customers such as Eastern Europe.

Question: To whom will the Eastern European nations, who have been highly dependent on Soviet petroleum, turn to fulfill their oil and gas requirements should the Soviets discontinue supplying petroleum to them at favorable prices?

Answer: The Soviets have already announced that in 1991 they will begin to implement market pricing for energy exports to East European countries and require payment in hard currency. These policies will have a dramatic effect on Eastern Europe. In response, this market will most likely be captured by those countries which offer creative deals. Given the oil resources available, it is likely that the Middle East will be a very likely supply source. Finally, talks already have begun on supplying gas to East Germany from West Germany. We would expect other Eastern European countries to seek gas supplies from other sources such as Norway and Algeria.

Question: How will cutbacks in Soviet exports affect the United States?

Answer: In the future, we are not certain whether the Soviets will be cutting back their exports of oil because of their need for hard currency. It is unlikely, however, that they will increase oil exports, particularly if they do not invest in new equipment and technology to exploit new, more technologically complex fields.

Question: Would you anticipate that world oil supplies will become tight from the entry of Eastern Europe into the world oil market?

Answer: Whether or not oil supplies will become tight if East European countries purchase oil on the world market, depends on a number of factors. Their outcome is uncertain at this time. The first factor is how effective these countries will be in restructuring their economies. If the restructuring results in a healthy economy which would require more energy, then there would be increased demand for available supplies. Even if this occurs, however, it is likely that the Eastern European economies will deteriorate further in the short term, before improving, which will result in a decrease in energy demand in the near future. Another factor to consider is how efficiently the Eastern Europeans will use energy. If in building their economies they use efficient equipment and implement conservation measures and technology, then the growth in demand would not be dramatic. Finally, the impact on the world market will depend on the Soviet energy outlook. It is unclear whether or not the Soviets will be able to make the investments required to boost oil production sufficiently to maintain oil exports at the current level and to continue meeting domestic needs.

Question: What effect could this have on oil prices?

Answer: The effect on world oil prices depends on the growth in demand and on the ability of the Soviets to make sufficient investments to maintain oil production levels and continue exporting.

Strategic Petroleum Reserve

Question: Recently, legislation was passed authorizing the expansion of the Strategic Petroleum Reserve from 750 million barrels to one billion barrels. In light of the recent events in Eastern Europe, have other nations either increased or decreased their individual oil reserve programs?

Answer: Events in Eastern Europe are being closely monitored and have been the subject of numerous discussions in various international fora. Given the fundamental changes taking place in Eastern Europe, it is too early to conclude how such events will be reflected operationally in emergency programs, such as national oil reserve programs. Over the last year, there have been some modest increases in oil stocks held by members of the International Energy Agency. At the present time, however, we would not attribute these increases to recent events in Eastern Europe.

The Administration opposes the provisions in the Senate bill expanding the Strategic Petroleum Reserve (SPR) from 750 million barrels to one billion barrels because such an expansion is contrary to the results of extensive studies, mandated by Congress and the President, and completed in early 1990. These studies concluded that a 750 million barrel SPR provides substantial protection against a range of worst-case disruptions and ample deterrence against embargoes. Based on a number of economic and strategic considerations, we believe that there is no justification for expending the substantial funds ($12 billion using conventional financing methods) required to construct a billion barrel SPR. Events in Eastern Europe have not changed the Administration's judgment that expansion of the SPR to one billion barrels is neither needed nor justified.

Question: Do you believe that West Germany will have to enhance its own oil reserves in preparation of its unification with East Germany?

Answer: We believe that the future oil balance of the Federal Republic of Germany (West Germany) will be significantly affected by its union with German Democratic Republic (East Germany). The Department participated in a recent in-depth review of West Germany's emergency programs conducted by the International Energy Agency (IEA). The IEA, among other things, considered East German oil demand and the implications for emergency oil reserves.

The IEA Emergency Review Team found that East Germany's energy consumption is highly inefficient with oil reliance projected to increase. Based on previous studies, West German energy officials believe, on the other hand, that oil demand in the Federal Republic has peaked and will decline. West Germany plans to update an important 1986 study on oil supply/demand prospects and security problems to take into account the integration of East Germany into the Federal Republic.

In light of German reunification, the IEA Emergency Review Team has recommended that West Germany examine in detail overall German oil consumption, analyze the emergency preparedness and stockholding implications thereof, and prepare carefully to ensure a smooth energy transition.

Question: Will the newly democratized Eastern European nations need to develop reserves that will be independent of the Soviet Union's resources?

Answer: We would encourage the countries of Eastern Europe to develop reserves, just as we now do with other countries in multilateral and bilateral fora. At the same time, we recognize the massive capital requirements already facing these countries. The need to increase the efficiency of energy use, to diversify the kinds and sources of energy they use, and to reduce pollution resulting from energy production, transport and use will constrain their abilities to construct and fill strategic reserves.

Question: What effect could the entry of Eastern European nations have on membership in the International Energy Agency?

Answer: Given the early stages of political and economic reform in these countries, consideration of membership in the International Energy Agency (IEA) would be premature. There are other ways and means for the IEA to assist those countries in Eastern and Central Europe that have demonstrated progress in reforming their political and economic systems. The IEA already this year, in cooperation with the Government of Denmark, sponsored a seminar on energy policy for Polish officials in which DOE officials participated. The IEA currently is examining a similar seminar for Hungarian energy officials.

Question: What would be your recommendations in this regard?

Answer: At the May 16-17, 1990, meeting of the IEA's Governing Board, the question of IEA assistance to Eastern European countries was discussed.

The U.S. Government (DOE and the Department of State were represented) encouraged the IEA to explore means to assist those Eastern European countries demonstrating political and economic reform, within the existing limits of the IEA budget and any voluntary additional contributions. The IEA will present a more thorough work plan and budget in this regard at the October 1990 meeting of the Governing Board.

Question: What potential impact could all this new activity have on SPR?

Answer: This new activity currently has no impact on the SPR. We believe that the goal of a 750 million barrel Strategic Petroleum Reserve (SPR) is still the most appropriate and prudent oil stockpiling policy for the United States. We stand firmly behind all of our commitments to the International Energy Program and will continue to encourage oil importing countries to build strategic stocks as the best mechanism to deal with severe oil supply interruptions.

The Department of Energy will, of course, continue monitoring the East European situation.

Uranium Enrichment

Question: I know that DOE's uranium enrichment activities are not within the jurisdiction of this Subcommittee. Nevertheless, I would like to take the opportunity to review the current status of reports that DOE is undertaking discussions with the Soviet Union to directly purchase enriched uranium.

Do these discussions have Administration support?

Answer: The Department is currently evaluating a range of alternatives to allow the uranium enrichment enterprise to compete effectively in a free market environment. I have not yet reached any final decision as to which among these we will implement. We are in the process of developing a unified position within the Administration through the interagency process before talking further with the Soviets.

Question: Are you concerned that such purchases by DOE would further erode our energy independence?

Answer: If the Department were to make such a purchase, it would only be on terms that would strengthen the Department's international competitiveness. Any purchase would be for a limited quantity of separative work units (SWU) at prices that would lower our overall costs. Moreover, meeting some of our requirements with Soviet SWUs would allow us to produce the remainder more economically. These cost savings could be passed on to the Department's customers, making us more competitive. We believe that a strong, competitive enrichment enterprise is one of the best guarantees against the erosion of nuclear energy independence.

Question: Would such agreements effectively promote a uranium cartel?

Answer: As we stated earlier, we are evaluating a number of alternatives including determining whether purchasing a limited quantity of enrichment from the Soviets would be a prudent decision. Natural uranium would not be involved. Should any agreement be pursued subsequent to interagency review with the Administration, we expect that it would involve conditions that would be fully consistent with the U.S. antitrust laws.

Question: Following your confirmation, you stated that a priority was enactment of legislation to establish a Federal Enrichment Corporation. What are you personally doing to support enactment of such legislation?

Answer: Since the Senate's passage of legislation similar to that I proposed to Congress more than a year ago, my staff and I have taken every step we can think of to expedite action on such legislation by the cognizant House committees to move a bill to the floor as soon as possible. The Smith Barney study, itself, was an effort to provide a rigorous, independent analysis of alternatives for the enrichment enterprise that would promote discussion and movement on the issue.

I have indicated my personal commitment to the passage of this legislation in the letters that I sent to the committee chairmen in both Houses submitting the Smith Barney Report. My staff has briefed key Congressional staff members and industry representatives regarding that Report. I have encouraged and facilitated Smith Barney Chairman Frank Zarb's meetings with key House committee chairmen; to date he has met with Chairmen Dingell, Sharp, and Lloyd to solicit support and encourage House action. I have asked Deputy Secretary Moore to follow-up on Mr. Zarb's meetings by urging Chairman Sharp for a prompt hearing on the proposed legislation. Assistant Secretary Young will be scheduling meetings with all committee chairmen and ranking minority members to request expeditious markups and votes on our proposed legislation.

I would welcome any additional suggestions you may have to bring about House action on the legislation.

National Energy Strategy

DOE's goal to develop a National Energy Strategy is good, long overdue and eagerly awaited. However, it appears that much of the extensive criticism of an earlier draft of the "Oil Research Program Implementation Plan" has been ignored. Many interpreted the oil implementation plan to lack a national focus. Instead, the plan proposed to fund research in a particular type of reservoir or in a particular region. To commit all significant funds in this way is unjustified and will leavy large gaps in our knowledge of the nation's energy reserves and problems.

Insufficient attention has been paid by DOE to the oil and gas resources of the Rocky Mountain region in the past. The Rocky Mountain petroleum reservoirs are complex and distinct from the geologically simpler reservoirs that DOE has studied to date. The mid-continent-Texas-Gulf coast reservoirs are not necessarily good analogues for reservoirs throughout the country; hence, study of them alone cannot provide a suitable basis to develop or substantiate a national energy strategy. It will take considerable time and effort to unravel the complexities of the Rocky Mountain reservoirs.

Question: What is the state of knowledge on petroleum reservoirs in the Rocky Mountain region compared to those in the mid-continent-Gulf Coast-Texas region?

Answer: The best current reservoir description and engineering analysis has been applied by operators, service companies, engineering consultant firms and state agencies to all domestic reservoirs. Advanced extraction technology has also been tested and applied in the Rocky Mountain region. Further, the region is well covered by the 3,700 reservoirs in our data base. It should also be noted that 9 states were analyzed in the abandonments study that supported development of the oil plan. Three of the 9 are in the Rocky Mountain region.

The current data base, developed by the National Petroleum Council for their 1984 study of EOR potential, includes 90% of the oil-in-place in Montana, 92% of North Dakota, 19% of South Dakota, 66% of Wyoming, 80% of Utah, 71% of Colorado, and 75% of New Mexico.

Question: None of the reservoir types discussed in the draft Oil Implementation Plan of the NES are even remotely analogous for example, to the complex overthrust belt fields of the Rocky Mountains. Some of these Rocky Mountain fields are the largest and most significant discoveries onshore in the lower 48 states over the last two decades. How do you propose to incorporate these poorly understood, but extremely important reservoirs into your research plan and how long will it be before you can start?

Answer: The following states of the region are now being classified according to the expanded system: Colorado, Montana (including the Williston Basin), Utah, and Wyoming. Reservoirs from all the producing states will be aggregated by class, and those with the most potential for future production will be the subject of problem definition efforts. The problems will be defined in cooperation with operators, service companies, consulting engineers, research universities, and state agencies familiar with, and currently involved in the class. The classification effort is now underway, and we anticipate holding the first class meetings before the end of the year.

Question: The National Energy Strategy address the the problem of integrating the nation's oil and gas reserve efforts. What are the advantages of encouraging and utilizing multi-disciplinary efforts on individual studies to sully understand complex problems?

Answer: By integrating field characterization research with technology transfer and environmental efforts at the beginning of a multi-disciplinary effort, a more effective and rapid application of the results can be anticipated. It should be noted that the approach outlined in the oil plan in multi-disciplinary and combines all specialties of geoscience and reservoir engineering with fundamental science. The plan calls for an integrated approach to overcome the specific reservoir heterogeneities that hinder economic production of the remaining oil.

Question: What is DOE doing to foster this type of approach to scientific investigation?

Answer: After receiving a large number of public comments on the draft Oil Implementation Plan, the document was revised to explain that the plan is intended to address all producing states. Work is now in progress to extend reservoir classification to as much of the domestic resource as possible. The reservoirs in our data base cover all major producing states, including those in the Rocky Mountain Region. Representatives from the Region have reviewed the expanded classification scheme, and are now applying it to their states. We expect that each priority reservoir class will have representative reservoirs in many states.

Question: We admire your efforts to have open competition for cost-shared funds, but you have not addressed important research problems in some geographic regions, jeopardizing the validity of NES. What mechanism do you propose, or what efforts will you make to address these regional problems on a timely basis?

Answer: The Department believes that problem definition efforts will assure identifying key regional issues, and give us the best chance of addressing them promptly. As to what specific efforts should be undertaken, no decisions have yet been made as to what work will be sponsored. For each significant reservoir class that is identified, a broad cross section of operators and others with experience in the class will be contacted to determine the problems and opportunities. This may occur as the result of workshops or meetings for each significant class. The problem definitions will be used to formulate the programmatic approach to be followed. We anticipate such analysis on as many as 12 classes (10 of which may be the target of field work) covering the full domestic resource.

Clean Coal Technology

Question: Some electric utility companies who are participating in the clean coal program (or who have been selected to participate) have indicated that they may "drop out" of the program should the Clean Air Act legislation currently pending before the Congress be enacted into law. What is your assessment of this situation?

Answer: Clearly, it is not possible to evaluate the full impact of the Clean Air Act amendments legislation until it is passed by Congress and the full extent of its provisions is known. However, a number of utility spokesmen have indicated that both the level of emissions reduction established as well as the time periods set for compliance will be major factors in their decision. These decisions will be between the conservative approach of investing in the available state-of-the-art FGD systems and the more innovative but higher risk clean coal technologies.

Given that many boilers do not warrant replacement, and the timing on technology availability, retrofit technologies will play a major role in meeting Phase I and II emission reduction targets. Consequently, clean coal technology retrofit projects are clearly consistent with expected compliance. Extensions on compliance and incentives for repowering technologies have been incorporated in the bills. But, those utilities faced with a high price tag to retrofit for compliance are going to be hard pressed to support parallel repowering projects with their attendant major investment requirements (unless the repowering is compliance oriented).

Question: Do you foresee many project sponsors withdrawing from the program if the Clean Air Act bill passes?

Answer: Only two project sponsors have expressed concern relative to concurrently financing compliance and their clean coal repowering project. They are awaiting final Congressional language before defining project impacts. One project sponsor expressed concern over being able to implement his repowering of a gas/oil-fired boiler with a clean coal technology unless allowances were provided in the Clean Air legislation. Congress did make provision in the proposed bills.

Although attempts were made to deal with the issue in the bills, WEPCO remains a problem. If not appropriately addressed in the Clean Air legislation, some projects may not go forward. In testimony given by Richard Schmalensee before the Senate Energy Committee on May 8, 1990, principles were set forth which should allay the concerns raised by the utility industry. The Administration is drafting language in accordance with those principles for consideration by Congress.

Question: What do you believe the impact of passage of this legislation would have on either the current program or your planned program?

Answer: One provision of the proposed Clean Air Act amendments of particular concern is the Sharp amendment. It would reduce a national program striving to develop a strategically sound response to growing energy needs and environmental concerns over the near and long-term to one of regional focus striving to meet near-term compliance. The Sharp amendment has a strong compliance/retrofit technology bias that would jeopardize development of the repowering technologies needed to cope with growing energy demands and emission limits in the post year 2000 timeframe. Furthermore, the more efficient clean coal repowering technologies are needed if coal, our most abundant energy resource, is to continue to play a major role in energy production in the face of global warming concerns.

Furthermore, if the Clean Coal Program is to play a role in mitigating the cost of implementing Clean Air legislation, it is essential that the timelines set for meeting emission reduction targets be consistent with clean coal technology availability. Also, the stringency on emission reduction levels along with the timing will be a deciding factor in whether utilities take a conservative approach (i.e., choosing to go with conventional high cost scrubbers) in lieu of using clean coal technologies.

WEPCO remains unresolved in the pending bills and a threat to many clean coal projects. The Administration is drafting language to correct the problem for consideration by Congress.

Question: Representative Sharp has included language in the House version of the Clean Air Act restricting use of available clean coal technologies to only the owners or operators of Phase I affected sources. In your judgment, how would such a restriction impact the clean coal program?

Answer: The Clean Coal Technology (CCT) Program would become a regional rather than a national program involving only 24 states--16 with greater than 50%, and 8 with less than 50%, of their electric generating capacity affected. The balance of 26 states would be excluded from CCT Program funding. Furthermore, only 64 of 291 owner/operators of steam generating utilities in the U.S. would be eligible for CCT funding.

A regional focus for the program involving only a handful of utilities precludes a strategic approach that considers the most effective use of all U.S. coal resources and removes any incentives for other coal users (i.e. utilities in non affected states as well as industrial consumers nationwide) to participate in the modified CCT program with very limited objectives.

In addition, the amendment would likely result in the preferred use of retrofit technologies over repowering technologies. If this occurs, the highly efficient and low emitting repowering technologies will not be demonstrated in a timeframe consistent with meeting post year 2000 energy needs under the emission cap established by Clean Air Legislation.

Question: Would western states be eligible for clean coal projects?

Answer: Western states would be largely excluded from participating in the CCT Program under the Sharp amendment. Only the following western states would be eligible, but to varying degrees as indicated:

Minnesota	Greater than 50% electric generating capacity eligible	(80%)
Iowa	" "	(92%)
Missouri	" "	(92%)

Kansas	Less than 50% electric generating capacity eligible (26%)
South Dakota	Less than 50% electric generating capacity eligible (5%)

Question: How many utilities would not be eligible for clean coal funding if the Sharp provision is enacted?

Answer: If the Sharp provision is enacted, 227 utilities would not be eligible for CCT funding.

Question: What is the Administration's position on the Sharp provisions?

Answer: The Department of Energy opposes the Sharp provision for the following reasons:

- The Clean Coal Technology (CCT) Program would no longer be a national program. Under the Sharp provision, the CCT Program would be focused toward 64 utility companies in 21 states, thereby essentially excluding 29 states and 80 percent of the utility companies. Furthermore, the Sharp provision precludes development of technologies for using western coals.
- The Sharp provision by virtue of offering incentives for near term compliance and focusing on those utilities affected by Phase I compliance strongly biases the CCT Program in favor of retrofit technologies. It is the repowering technologies, however, that are needed if:
  - this country is to meet post year 2000 electric power generation demands under the Clean Air Act emission laps,
  - from a domestic and worldwide standpoint, global change concerns are to be addressed in a responsive manner,
  - and the U.S. dependence on foreign oil is to be mitigated.
- The Sharp provisions would also preclude support of innovative clean coal technologies in the non-utility sector. Yet new technologies in the steel industry, or other industrial applications can have significant impact on local and regional environments, and contribute toward mitigating dependence on foreign oil.

Question: The Department has had a great deal of trouble getting an IGCC (Integrated Gasification Combined Cycle) project off the ground even though this appears to be one of the most promising clean coal technologies for both repowering and new, "greenfield" coal-fired power plant applications. Do you anticipate start up of an IGCC project in the near future?

Answer: There are two IGCC projects in the Clean Coal Technology Program. The CCT-II project, Combustion Engineering IGCC Repowering Project, is scheduled to start operations in the middle of 1995. The recently selected CCT-III CRSS Capital, Inc. project, IGCC Demonstration, is scheduled to start operations by the end of 1993.

In addition to the CCT projects, a number of private industry projects have been announced. The most prominent of these is a project in Massachusetts to be run by a consortium led by Texaco. The schedule for this project is less well defined. Dow has formed a subsidiary to commercialize its IGCC know-how. No projects have as yet been announced.

Question: What is the status of the IGCC projects that have been selected under the program?

Answer: The CCT-II project, Combustion Engineering IGCC Repowering Project, is in the final stages of approval for the negotiated Cooperative Agreement. It is anticipated that the agreement will be signed before the end of the summer. In line with the Secretarial Directive, the Comprehensive Report to Congress on this project will be available by July 31, 1990.

The CCT-III CRSS Capital, Inc. project, IGCC Demonstration, is in the fact-finding stage. Formal negotiations are expected to start this summer. The Comprehensive Report to Congress for this project will be available before the end of the year with the signing of the Cooperative Agreement expected early in 1991.

Question: Admiral Watkins has put into place streamlined procedures for the negotiation of cooperative agreements under the clean coal program. Have these procedures resulted in expedited negotiations?

Answer: Yes. Since initiating the procedures last November, negotiations have been completed and Comprehensive Reports submitted to Congress on 13 projects, leaving only 4 of 25 active projects in CCT-I & II in negotiation. Negotiations have been completed on the first of the 13 CCT-III projects and the Comprehensive Report has been submitted to Congress. The remaining projects in CCT-III are being negotiated on a schedule that satisfies the Secretarial Directive.

Question: Do you anticipate meeting the target set by Admiral Watkins to complete negotiations on all Round III projects by this December?

Answer: Yes. The CCT-III negotiations are proceeding in a very orderly manner. The first Comprehensive Report to Congress has been submitted to Congress. All negotiation schedules have been agreed to by the Participants and no trouble spots are currently expected.

Question: Would you explain to the Committee the impact that the WEPCO decision is having upon the conduct of clean coal projects?

Answer: The WEPCO decision has created a great deal of concern on the part of Clean Coal Technology participants. The M. W. Kellogg integrated gasification combined cycle project was terminated in large part because of a host site's fear of WEPCO impacts. The Energy and Environmental Research Corporation gas reburn/sorbent injection project suffered a five month hiatus and was nearly terminated as a result of WEPCO. Extraordinary efforts on the part of the Department's higher management were necessary to keep the project from terminating. The cost impact is being evaluated. Progress in negotiations on many of the clean coal projects under Round II was slowed as Participants evaluated WEPCO impacts . Many Round III proposers set forth conditions in their proposals relative to WEPCO. It is not known how many potential proposers were turned away by the threat of WEPCO.

The Department has been able to mitigate the impacts of WEPCO by aggressively working the issue with EPA and the Participants. But, progress has been maintained only with the promise that an acceptable solution would be worked out through an Interpretive Ruling by EPA and/or through legislation. EPA has not been forthcoming with an Interpretive Ruling. It is hoped that acceptable legislation can be worked out.

Question: Are you familiar with testimony given by Richard Schmalensee of the Council of Economic Advisors before the Senate Energy Committee on May 8 in which he set forth the Administration's position on WEPCO?

Answer: The Department is familiar with and supports the testimony given by Richard Schmalensee before the Senate Energy Committee on May 8, 1990.

Question: How does the Administration intend to effectuate that position?

Answer: Legislation embodying the principles set forth in the testimony should allay the concerns raised by the utility industry. The Administration is drafting language in accordance with those principles for consideration by Congress.

Polish Retrofit Project

Question: What is the current status of the program, including a timetable for issuing a solicitation and awarding a contract?

Answer: The SEED Act directs the Department of Energy (DOE) to retrofit a coal-fired commercial powerplant in the Krakow, Poland, region with advanced clean coal technology. An International Agreement for the project was signed on March 15, 1990. DOE will issue a solicitation in early August 1990 and there will be a site visit in late August 1990. Proposals will be due to DOE in early November 1990 and a selection will be made by the end of March 1991.

Question: Please describe to the Committee the proposed restrictions to be placed upon foreign participation, and the Department's rationale, if any, for those restrictions. We have heard concerns that qualifications regarding companies or entities that may propose as well as eligible technologies are too restrictive and at the least go beyond what the statute calls for. Are these concerns accurate? Do your current guidelines go beyond the letter of the authorizing legislation, and if so, why?

Answer: DOE has not issued guidelines for the project. These will be included in the solicitation when it is issued. On June 1, DOE held a presolicitation conference at which time proposed qualification criteria were reviewed. One of the qualifications was that any proposer must be a U.S. company. This qualification is consistent with the legislation and caused no concerns.

The concerns expressed were with regard to the draft definition of "U.S. Company." The concerns were that by including a statement to the effect that a "U.S. Company" may not be a subsidiary of a foreign company, DOE would exclude many firms that are in fact conducting business in the U.S. It is believed that if the constraint on not being a subsidiary of a foreign company is removed, it can still be consistent with the legislation, open the program to more companies doing business in the U.S. and still assure that benefits from this program can still be derived in the U.S.

Question: Is the Department reconsidering these proposed qualifications in light of these concerns? If not, will the Department reconsider?

Answer: Yes. The Department is considering deleting the part of the definition requiring that a U.S. firm not be a subsidiary of a foreign firm.

Question: Please give us an assessment of how many companies and technologies might be eliminated by the more restrictive qualifications which have been proposed, and how many will be left in the competition.

Answer: It is difficult to provide such an assessment without a detailed knowledge of the status of each company. However, we believe that regardless of how many companies are affected, it is in the U.S. interest to employ a definition without the constraint that a U.S. firm cannot be a subsidiary of a foreign firm.

Question: As you know, Congress considers this project to be an important test case. We are concerned that setting qualifications which go beyond the statute may threaten the purposes of the project, by eliminating so many otherwise worthy companies or technologies that we end up with a project that falls far short of our best efforts. If that happens, the program's goal of giving U.S. vendors a head start in the Eastern European market will have been frustrated. Has the Department considered this possibility, and if so, what are your conclusions?

Answer: The DOE is committed to designing a program that supports U.S. objectives. We believe that the definition of a U.S. company that eliminates the constraint identified previously supports that objective and is consistent with the language of the legislation.

Question: We are also concerned that using unnecessarily restrictive qualifications will send entirely the wrong message to an emerging free market economy and invite retaliation or other trade war behavior by Poland at the very beginning of our efforts to redefine our economic relationship. Has the Department also considered this possibility, and if so, what are your conclusions? Have you consulted with our foreign policy officials as to whether these kinds of restrictions are consistent with our objectives in Eastern Europe?

Answer: The DOE is committed to designing a program that supports U.S. objectives. We believe that the definition of a U.S. company that eliminates the constraint that a U.S. company cannot be a subsidiary of a foreign firm supports that objective and is consistent with the language of the legislation.

Molten Carbonate Systems

Question: The Department's budget submission notes that, "International fuel cell development efforts are underway, but the U.S. is the current world leader. If this lead is maintained and the development goals are met, the U.S. could become the leading exporter of this technology." The Department's funding request, however, is only $5.685 million, a 66% cut from FY90 appropriations. Even with the recent down-selection, how can that funding level continue to maintain our world lead?

Answer: The Department's FY 1991 funding request of $5,685,000 for molten carbonate fuel cells would result in a reduced level of effort and a stretchout of planned activities.

The U.S. lead could be maintained if increased contractor cost sharing and private sector support, e.g., EPRI and GRI, are realized in FY 1991, and through continued commercialization efforts by industry.

Question: Now that the Department has selected two MCFC contractors for continued full development and one for stack research only, what are the Department's plans for driving those technologies to commercialization?

Answer: The Department plans to develop and test the required technology at the full scale stack/system level over the next three years. Contracts for this effort are under negotiations and are aimed at providing the foundation for commercial development. Further system refinement and testing is expected to lead to small pilot plants by the mid 1990s and initial commercial power plants by the private sector prior to the year 2000.

SUBCOMMITTEE RECESS

Chairman BYRD. And this concludes our questions for this afternoon. I thank you very much. The subcommittee will stand in recess until 2:30 p.m., Monday, June 18, when we will receive testimony from the Secretary of the Interior.

[Whereupon, at 5 p.m., Tuesday, June 12, the subcommittee was recessed, to reconvene at 2:30 p.m., Monday, June 18.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1991

THURSDAY, JULY 12, 1990

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:05 a.m., in room S–128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, Leahy, Burdick, Bumpers, Reid, McClure, Stevens, Cochran, Domenici, and Hatfield.

Also present: Senator Lautenberg.

DEPARTMENT OF THE INTERIOR

SECRETARY OF THE INTERIOR

STATEMENT OF MANUEL LUJAN, JR., SECRETARY

ACCOMPANIED BY:

- LOU GALLEGOS, ASSISTANT SECRETARY, POLICY, MANAGEMENT AND BUDGET
- ANTHONY ITTEILAG, DIRECTOR OF BUDGET
- BARRY WILLIAMSON, DIRECTOR, MINERALS MANAGEMENT SERVICE
- CY JAMISON, DIRECTOR, BUREAU OF LAND MANAGEMENT
- HARLAN WATSON, DEPUTY ASSISTANT SECRETARY, WATER AND SCIENCE, AND SCIENCE ADVISOR TO THE SECRETARY
- JOHN TURNER, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE
- DAVID GAYER, SOLICITOR'S OFFICE
- RANDALL LUTHI, SOLICITOR'S OFFICE

OPENING REMARKS

Chairman **BYRD.** The subcommittee will come to order. The Department of the Interior will give testimony today on the fiscal year 1991 budget, and we will receive testimony from the Secretary of the Interior, Manuel Lujan, Jr.

We want to welcome you, Mr. Secretary. We have your prepared statement, and it will be inserted in the record in its entirety, and you may wish to introduce any of your supporting witnesses, and then you can summarize your statement, if you prefer, after which the subcommittee will ask questions.

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SUMMARY STATEMENT

Secretary **Lujan**. Thank you very much, Senator Byrd. It is a pleasure, of course, to appear before the subcommittee. Since my first appearance before you last year, I have been hard at work to advance the President's mandate of stewardship over the resources entrusted to the Department.

The President's budget is a blueprint of the key initiatives of the Department. It reflects a strong commitment to the environment, while at the same time making an essential contribution to the deficit reduction efforts.

The January 1991 budget for the Interior Department is the largest ever made by a President and the numbers are as follows. Approximately $7.7 billion is the total budget authority, and for programs under the jurisdiction of this subcommittee, we are requesting $4.9 billion.

DEPARTMENTAL RECEIPTS

The total receipts resulting from activities of the Department are estimated to be $5.5 billion in 1991, and that is an increase of $525 million compared to the current estimate of 1990.

Senator, the Department usually carries its own weight, with earnings offsetting our budget request. This year, however, we won't do that, primarily because the OCS receipts are not as high as in some years in the past. From 1980 through 1989, OCS receipts averaged $5.8 billion per year.

AMERICA THE BEAUTIFUL

By comparison, 1991 is $3 billion, or about one-half of the historical average. Within the budget, we are proposing significant increases for several initiatives. The first initiative is America the Beautiful, the President's proposal for promoting the conservation of and enhancement of recreational activities on our public lands.

The amount of $366 million has been budgeted for this initiative, an increase of nearly $70 million over 1990. These increased funds will provide for commitments to resource protection, construction, recreation, and enhancement and land acquisition for parks, refuges and public lands.

LEGACY '99

The second initiative coincides with the Department's 150th anniversary in 1999. We call it Legacy '99, which is the long-term goal of substantially improving by the end of the decade the condition of resources and facilities managed by the Department.

Legacy '99 includes programs to enhance our land managing agencies through emphasis on increased maintenance, construction and collection of hazardous materials, and correction of dam safety problems over the next 9 years. We estimate, Mr. Chairman, a backlog, of some $2 billion in repairs that are needed for facilities on public lands, such as buildings, roads, and dams.

The request for Legacy '99 is $646 million, an increase of $114 million over the 1990 budget. These are some of the highlights of our fiscal year 1991 budget proposal. We believe that they are all aimed at improving the quality of resources of the Department of the Interior.

PRESIDENT'S ANNOUNCEMENT OF OCS PROGRAM

Finally, Mr. Chairman, let me mention three important announcements made in the past several weeks. First, regarding our offshore oil and gas programs, the President's announcement is this administration's commitment to prohibit offshore drilling in areas where environmental risks outweigh the potential energy benefits to the Nation.

SPOTTED OWL LISTING

Second, we announced our plans to protect the spotted owl, consistent with my responsibilities under the Endangered Species Act, while at the same time minimizing economic disruption in the timber industry in the Pacific Northwest.

MELLON DONATION

Finally, Mr. Chairman, there is a donation to the Federal Government by the Richard K. Mellon Foundation of nearly 100,000 acres of land, principally historic Civil War sites, and wildlife refuges. Let me also say that I thank you for your continued dedication to our program, and I continue to look forward to working with you on the important issues that confront us, and that is the natural, recreational and cultural resources of the Department of the Interior.

PREPARED STATEMENT

And I just wanted to extend my best wishes to Senator McClure, as this will probably be his last hearing with the subcommittee, and a special note of thanks from all of our Interior employees. Now, Mr. Lou Gallegos, our Assistant Secretary for Policy, Management and Budget, and Tony Itteilag, our Budget Director, whom you know, are with me, and they and myself will answer any questions that you may have. Thank you.

[The statement follows:]

STATEMENT OF MANUEL LUJAN, JR.

It's a pleasure to appear before the Subcommittee. Since my first appearance before you last year, I have been hard at work to advance the President's mandate of Stewardship over the resources entrusted to us.

As we look to the next decade, much needs to be done to enhance the caliber of our public lands and resources so they are in even better condition than when stewardship was assumed. The President's Fiscal Year 1991 budget is a blueprint of the key initiatives of the Department. It reflects a strong commitment to the environment, while at the same time being consistent with deficit reduction efforts.

My statement will outline some of the major initiatives of the Department in 1991. Nearly all Interior bureaus have appeared before this Subcommittee and have detailed their individual proposals for you. Within our overall budget request, we propose several new initiatives and augmentation of some existing programs. Among the new initiatives is "America the Beautiful". This is the President's proposal for promoting conservation and enhancing recreational activities on our public lands. This initiative provides for commitments to resource protection, recreation enhancement, construction, and land acquisition for parks, refuges, and public lands.

A second major initiative, one that is linked to and complements America the Beautiful, coincides with the Department's 150th anniversary in 1999. "Legacy '99" is an initiative with a long-term goal of substantially improving, by the end of the decade, the condition of resources and facilities managed by the Department. It includes programs to enhance the infrastructure of our land managing agencies through emphasis on increased maintenance, construction and clean up of hazardous materials and correction of dam safety problems over a period of the next nine years.

Another important initiative is wetlands. The President has made it clear that a goal of his Administration is no net loss of wetlands in the United States. To support this goal, we are proposing an increase that will aid in the protection, restoration, and research of the Nation's wetlands.

In our Native American programs, we propose several management improvements. Department-wide, we propose a new Office of Quality Assurance in the Under Secretary's office, continued emphasis on the Office of Construction Management, and improved management of mineral leasing. We have also established a Water Policy Group that is overseeing a number of ongoing Indian Water Settlements and propose that the Bureau of Reclamation assume responsibility for dam safety activities on Indian reservations. Within the BIA, we propose increases for improved internal controls and management of tribal trust funds.

The Interior Department has been very much in the news in the past several weeks, and I would like to mention briefly the important announcements that were made.

First, regarding our offshore oil and gas program, the President's announcement is this Administration's commitment to prohibit offshore drilling in areas where environmental risks outweigh the potential energy benefits to the Nation. This announcement follows more than a year of careful analysis of this complex and controversial issue by the President, his staff, and his OCS Oil and Gas Leasing Task Force which I chaired.

The President's decision defers until at least the year 2000 sales previously planned offshore California, Washington, Oregon, southern Florida, and the Georges Bank. In addition, the Interior Department will work with the State of Florida to buy back existing leases off the southern Florida coast.

The President's decisions will enable us to produce the energy America needs, while providing the environmental protection Americans demand. Recent tanker accidents underscore the need to produce as much oil and gas as possible in the United States, onshore and offshore.

Secondly, we announced our plans to protect the spotted owl, consistent with my responsibilities under the Endangered Species Act, while at the same time minimizing economic disruption in the timber industry in the Pacific Northwest; we are seeking to balance these interests. For 1991, the Director of the Bureau of Land Management has proposed a plan, which we believe is in full compliance with the Endangered Species Act and which is supported by the Administration, to protect the owl with only small decreases in timber harvest levels and consequent job losses.

Finally, there is the best sort of news, that is the donation to the Federal Government by the Richard King Mellon Foundation of nearly 100,000 acres of land, principally historic Civil War sites and wildlife refuges. These ten parcels are an unparalleled gesture by the foundation to preserve our heritage and unique culture and natural resources. I can assure you that our stewardship of these lands on behalf of the American people will be in keeping with their significant values.

With Congress' continued support, for which we thank this Subcommittee, 1991 will serve as a strong base for future years of diligent stewardship.

FY 1991 BUDGET TOTALS

The 1991 January budget request of $7.7 billion for the Department of the Interior, while a decrease of $516 million from the 1990 estimate, meets the many responsibilities of the Department, and provides for increased efforts to maintain and expand the Department's stewardship of the Nation's public lands and resources. For annual appropriations under the jurisdiction of this Subcommittee, we are requesting $4.9 billion.

Total receipts resulting from activities of the Department are estimated to be $5.5 billion in 1991, an increase of $525 million compared to the current estimate for 1990.

AMERICA THE BEAUTIFUL (ATB)

To carry out President Bush's pledge to undertake a program to strengthen and preserve the Nation's natural resources and responding to Congress' continued interest and concern in this area, the 1991 budget includes a major initiative called "America the Beautiful." The purposes of this initiative are to promote tree planting, enhance recreational opportunities and benefit nationally significant natural and cultural resources. America the Beautiful includes expanded land acquisition for national parks, wildlife refuges, national forests, and other public lands. For this Department, the America the Beautiful program totals $366 million.

ATB: RESOURCE PROTECTION/RECREATION, OPERATIONS

Operations activities for the America the Beautiful Program in the Bureau of Land Management (BLM), the Fish and Wildlife Service (FWS) and the National Park Service (NPS) will increase by $42.8 million, for a total of $156.0 million.

The operations increase for BLM is $6.9 million. Of that increase, $2.9 million is for Wildlife Habitat Management, which includes funding for fisheries and riparian habitats, threatened and endangered species, and other programs in the *Fish and Wildlife 2000* plan. The remaining increase of $4.0 million is for Recreation Resources Management under the *Recreation 2000* plan.

The operations increase for FWS totals $26.9 million. Of that amount, various activities which support the President's goal of no net loss of wetlands will increase by $11.8 million. These include wetlands inventory, agricultural wetlands restoration, the purchase of water rights and similar activities. In addition, the endangered species program will increase by a net $150 thousand. Finally the FWS budget fully implements the North American Wetlands Conservation Act, with $15 million included in the America the Beautiful program.

For the National Park Service operations program, the emphasis is on scientific research and studies, resources management, and planning with a total increase of $9.0 million. Of that increase, $3.8 million is for the regional science program, $2.5 million is for the natural resource preservation program, and $1.0 million is for planning related to the Presidio in San Francisco.

ATB: CONSTRUCTION

The construction component of the America the Beautiful program will fund rehabilitation projects in the BLM, FWS, and NPS which protect resources and provide recreational opportunities. The 1991 budget proposes an increase of $16.5 million over the amounts appropriated in FY 1990 for repair and rehabilitation projects related to environmental protection and recreation enhancement.

Funds included in BLM's construction budget under America the Beautiful are for six projects totalling $1.4 million. These projects will improve access to the public lands, enhance recreation opportunities, and protect resources. The FWS construction budget includes $2.3 million for America the Beautiful projects. These include projects related to sewage treatment facilities and road and bridge replacement. About one-half of the NPS construction budget is for America the Beautiful projects. This $45.4 million is for work at eight parks to protect and improve cultural or natural resources, including $7.5 million for the Everglades.

ATB: LAND ACQUISITION

Under America the Beautiful, the Federal Government's acquisition of lands to protect natural resources and to provide recreation opportunities would total $250 million, an increase of $35 million over the amount available for Federal projects in 1990.

The funding level for each bureau was determined by an Administration-wide land acquisition criteria ranking system. We thank the Congress for giving attention to these rankings in 1990. The ranking criteria have been refined for 1991. The Department of the Interior worked closely with the Forest Service of the Department of Agriculture to ensure agreement over the criteria used. For 1991, increased weight was given to projects which benefit wetlands and riparian areas and to projects which meet the individual missions of the four agencies involved. Of the total Administration program of $250 million, three-fourths of the projects have some wetland or riparian values.

The Interior Department is requesting $161.1 million for land acquisition. This is an increase of $9.6 million from the 1990 enacted level for Federal acquisition. The initiative includes $24.3 million for BLM, $56.7 million for FWS and $80.2 million for NPS.

MAINTAINING INFRASTRUCTURE -- LEGACY '99

As a complement to the America the Beautiful program, the 1991 budget also contains a major initiative to improve the physical infrastructure: the foundation for Interior program responsibilities. As part of my Stewardship agenda set forth upon taking office, I am proposing a major repair and rehabilitation program. This program is intended to continue through the 150th anniversary of the Department in 1999 and is an integral part of my goal for the Department to leave a legacy to the Nation as it enters the 21st Century.

The infrastructure portion of Legacy '99 is a program to repair and rehabilitate facilities in the Department's parks, refuges, and on other Interior lands. The Legacy '99 program also includes undertaking corrective action for unsafe dams, cleaning up hazardous materials, and increasing overall maintenance programs. Our budget request is $646 million, an increase of $113.5 million over the enacted level for comparable programs.

LEGACY '99: MAINTENANCE

One of the the goals of the Legacy '99 program is to improve the levels of maintenance for each of the three land-managing bureaus to prevent the accumulation of construction backlogs for repair projects. BLM's maintenance program will increase by $13.2 million to a level of $33.1 million. Funding for FWS maintenance for refuges will increase by $3.2 million to a level of $45.9 million. The NPS operational maintenance and cyclic maintenance programs will increase by $22.8 million to a level of $303.1 million.

LEGACY '99: REHABILITATION PROJECTS

In formulating the budget for 1991, a priority was to address backlogs of rehabilitation work identified by the Department's land managing bureaus. The construction budgets of BLM, FWS, and NPS include Legacy '99 components, some of which are part of America the Beautiful and some of which are part of this infrastructure initiative. America the Beautiful projects are those rehabilitation projects which protect natural resources and provide for recreation. The infrastructure initiative projects are all other rehabilitation projects, including repair of unsafe dams and hazardous materials clean up.

BLM's construction budget includes $2.7 million for rehabilitation projects at six sites. The FWS construction budget includes $9.4 million for planning and rehabilitation projects at seven refuge, hatchery, and research facilities. The NPS construction budget includes $43.7 million for housing, planning, and rehabilitation projects.

LEGACY 99: SAFETY OF DAMS

The Department is responsible for over 2000 dams, 377 of which qualify as high or significant hazard, that is, they may cause loss of human life, or property damage, if they fail. The Safety of Dams program consists of inspection, analysis, and corrective action for the high and significant hazard dams. The Department's dam safety budget for 1991 includes $90.6 million for the Bureau of Reclamation (BOR), including $9.1 million for BIA dams. Beginning in 1991, in order to facilitate timely corrective actions on these dams, the Department has included funding for safety modifications on BIA dams in the BOR budget. I believe strongly that the superior engineering and management capabilities of BOR should be used to assure improvement in the status of BIA dams. The budget also includes $13.5 million for FWS and $3.9 million for NPS.

LEGACY '99: HAZARDOUS MATERIALS MANAGEMENT

The infrastructure portion of the Legacy '99 program includes hazardous materials management. The total 1991 budget for the oversight, investigation, and clean-up of hazardous materials on Interior lands is $67.9 million, an increase of $23.4 million over the 1990 enacted amount.

Departmental management of hazardous materials sites is coordinated by the Assistant Secretary, Policy, Management and Budget through the Office of Environmental Affairs. Funding of $1.2 million in 1991, an increase of $0.9 million from 1990, will enable this office to track and monitor bureau site activities and provide improved methods for addressing Interior hazardous waste responsibilities.

The Department's budget for hazardous materials management for the bureaus includes $18.3 million for BLM, $14.4 million for the Bureau of Reclamation, $.8 million for the Geological Survey, $14.6 million for FWS, $14.0 million for NPS, and $4.6 million for BIA.

WETLANDS INITIATIVE

Within the 1991 Departmental budget request, funds for wetlands total $153.8 million, more than a 25 percent increase over 1990 funding. The remaining $50.7 million is for other critical wetlands work contributing to the "no net loss" national goal involving several bureaus: NPS, BLM, OSM, BOR, GS, and BOM. Taken together, the Department's program provides for implementation of a fully integrated wetlands program of protection; restoration and enhancement; and research, information, and education. This program also includes coordination and cooperation with other Federal agencies such as the Environmental Protection Agency, the

Army Corps of Engineers, and USDA, as well as State and private entities.

GLOBAL CHANGE RESEARCH PROGRAM

During the first year of President Bush's Administration, the U. S. has taken a leadership position in addressing the question of global climate change. The Nation took a major step in 1990 by establishing the U.S. Global Change Research Program (USGCRP). Because of the high priority attached to the USGCRP, the Administration is proposing more than $1 billion for 1991, an increase of $374.8 million, or 57 percent, over the 1990 level.

The Department is requesting $43.7 million in 1991 for its component of the USGCRP, an increase of $30.5 million over the 1990 enacted level of $13.2 million. Six bureaus (GS, BLM, MMS, BOR, FWS, and NPS) and the Office of the Secretary are participating in the 1991 USGCRP.

The Geological Survey, with most of the Interior funds -- $28.2 million, an increase of $15.0 million over the 1990 level -- will continue the design and development phase of the Land Data and Information Management System, establishing national and international information exchange networks, accelerating preservation and maintenance of over one million Landsat scenes, and initiating land surface characterization research. In geology, work will be expanded on various climates and arid regions and enable new research on biogeochemistry and volcanic emissions. In water resources, work will focus on how climate variability and change would affect, and be affected by, hydrologic processes; the development of methods for evaluating the sensitivity of diverse surface-water and ground-water systems to changing climatic conditions; and the processes associated with the generation and disposition of naturally occurring "greenhouse" gases. Other Interior bureaus will examine how global change may affect the missions and resources for which they have stewardship responsibility.

MANAGEMENT IMPROVEMENTS AFFECTING NATIVE AMERICAN PROGRAMS

Interior is carrying out a number of integrated efforts to improve management of Native American programs. One key element is our proposal to establish an Office of Quality Assurance within the Office of the Under Secretary. The office, with proposed funding of $0.5 million, will strive to improve overall Departmental management, with an emphasis on BIA in 1991. The initial charge for the office will be to provide innovative management support and direction for the implementation of management and administrative improvements in BIA programs. The office is being established in the Office of the Under Secretary to reflect the commitment to improved service to Native Americans, including closer coordination among bureaus which operate programs affecting Native Americans.

The Administration has placed new emphasis on improving the management integrity and accountability of Government agencies and programs. To this end, the President's 1991 budget requests funds to establish or augment offices to coordinate and manage the Federal Managers' Financial Integrity Act management controls and audit follow-up requirements at the Departments of Agriculture (Farmers Home Administration), Housing and Urban Development, Interior, and Veterans Affairs, and at NASA.

Interior's request to establish the Office of Quality Assurance is consistent with actions recommended by the Office of Management and Budget and with recent General Accounting Office statements on strengthening the management integrity function in agencies. Further, the placement of the Office of Quality Assurance in the Office of the Under Secretary will promote senior management involvement in correcting weaknesses identified by audits, the management control process, and internal and external studies. Bureaus often report that identified problems have been corrected, but, in fact, many times they have not been corrected. Thus, this office would oversee the resolution of material weaknesses identified in annual reports and validate the accomplishment and effectiveness of corrective actions. The management problems of the BIA necessitate immediate attention so as to guarantee that Indian programs and related financial management activities are improved and continually monitored.

A second effort in the 1991 budget is the continued management of the BIA facilities program, encompassing 3,400 facilities, by the Department's Office of Construction Management (OCM). OCM's direction has resulted in the improved management and maintenance procedures at facilities through the implementation of training and management initiatives. The program has addressed the backlog of most serious repairs and is addressing code compliance requirements through the standardized Facilities Improvement and Repair Program.

BLM and MMS, along with BIA, are proposing budget increases to improve their management and supervision of Indian mineral royalties. MMS is proposing an increase of $1.7 million to fund a cooperative audit program with the tribes, to support a spot audit approach of companies holding Indian leases, and to fund improvements in support systems. BLM is proposing an increase of $0.5 million to improve the frequency and intensity of on-site inspections. BIA is proposing $0.3 million to establish and staff a new Branch of Oil and Gas Lease Administration which will monitor and coordinate approximately 13,000 oil and gas leases, and the distribution of lease income to 30,000 individuals.

In response to over 30 IG reports in the past decade identifying deficiencies in the Bureau's management of the $1.7 billion held in trust for Indian tribes and individuals, I issued Order 3137 on October 26, 1989 establishing the BIA Office of Trust Funds Management to consolidate the Bureau's trust fund responsibilities. In 1991 the Bureau is requesting $2.3 million for this office which will centralize management of the trust fund responsibilities currently divided among two separate program offices.

To improve internal management, BIA is requesting $1.0 million for an Office of Audit and Evaluation which will provide a centralized office to develop and implement internal program and administrative reviews, and coordinate and monitor follow-up corrective action recommended by Inspector General and General Accounting Office reports.

STEWARDSHIP INITIATIVES

The 1991 budget emphasizes several areas in which the Department is taking a leadership role in promoting stewardship of public lands. Within the Stewardship concept, I have directed several initiatives which focus on improved use of human resources.

Activities involving illegal drugs endanger the public and also damage the environment through unauthorized production of unlawful substances. Therefore, in addition to other law enforcement activities, the Department is taking an aggressive role in the President's War on Drugs. As custodian of one-third of our Nation's land, the Department has modified its drug enforcement, education and treatment programs to reflect problems that may occur either in remote, relatively uninhabited areas and/or sectors in large urban centers.

During 1989, the Department's law enforcement officers, in addition to other responsibilities, reported 2,367 arrests for drug violations and seizures of drugs worth nearly $700.0 million in estimated street value.

In 1991, the Department proposes total funding of $39.5 million, an increase of $9.6 million over the 1990 level, to help fight the War on Drugs. The funding will enhance law enforcement efforts in eradicating drugs from the Nation's public lands and assist also in treatment programs for Native Americans.

Volunteer stewardship occurs throughout the country -- in parks, refuges, lakes, streams, reservations and multiple use lands. In 1989, about 77,000 volunteers donated 4.3 million hours of work, an increase of more than 5,000 in the numbers of individuals volunteering over 1988. In 1991, support of volunteers in the Department increases $3.9 million over the 1990 funding level of

$1.7 million. The $5.6 million will be used for a variety of volunteer support purposes including travel to sites, purchase of uniforms and equipment, and other incidental costs. I have set a goal of 100,000 volunteers for 1990 and 1991.

The Department carries out a variety of **education** programs. Other than its Indian education efforts discussed elsewhere in this statement, our education programs include activities in support of elementary, secondary, and post-secondary school programs, as well as those that are of educational importance for the general public regarding the Nation's natural resources. For 1991, the Department is requesting a total of $98.3 million for these activities, an increase of $7.4 million over 1990, with most of the increase being for NPS and FWS interpretative programs.

A total of $4.3 million is requested to enhance efforts regarding the employment of **women and minorities** in 1991, an increase of $2.6 million over 1990. The bureaus are seeking ways to enhance the recruitment, training, and advancement of women and minorities, especially as managers and in such critical professional areas as engineering, science, accounting and computer programming.

MANAGEMENT IMPROVEMENTS

Water Policy Council: Improved management of the Nation's water resources is a top priority of this Administration. Interior has specific responsibilities with respect to water issues involving public lands, BOR projects, and Indian Tribes. The Department, specifically the Geological Survey, also has a principal role in water quality research. Last June, I established the Interior Water Policy Council, to advise me on developing and implementing a strategy to improve the Nation's water resource management. The Council is comprised of senior Departmental officials and is chaired by the Under Secretary. Working groups are examining issues such as Indian water rights settlements, wetlands policy, dam safety, water quality and water use efficiency.

Internal Fiscal and Management Controls: In response to the Administration's heightened emphasis on enhancing the integrity and effectiveness of Federal programs, the Department has directed new initiatives to strengthen the management control program. A Department-wide Management Controls and Audit Follow-up Council, under the direction of the Under Secretary, has been established to provide senior management with direction in these efforts.

The Department is currently implementing all of the recommendations of the Government-wide report titled Improving the Management Process (July 1989). Since 1983, the Department has identified 134 material control weaknesses and has corrected

109 of the these. In 1991, $250 thousand is requested to address the strengthening of management control systems.

In the 1989 Federal Managers' Financial Integrity Act Report, the BIA accounted for 11 of the 25 material weaknesses in the Department. As part of the effort to address BIA and other Bureaus' material weaknesses, the $250 thousand mentioned above is being requested in the Office of the Secretary appropriation to strengthen management control systems within the Department, and will be focusing on BIA as a top priority.

Regulatory Review: The 1991 budget proposes that the Department's regulatory management function, in the Office of Policy, Management and Budget, be strengthened. With additional resources of $210 thousand, this will permit a better coordinated, comprehensive review of each bureau's proposed regulations and of regulations proposed by other Federal agencies. Recognition and analysis of issues, consistency with the law and with other regulations, policies and guidelines are the objectives of this management improvement.

OTHER BUDGET PROPOSALS

Mining Claim Holding Fees: The 1991 Budget includes appropriations language that proposes the establishment of an annual holding fee of $100 for each mining claim filed under the Mining Law of 1872. This fee would replace the current provision of the Mining Law, and related provisions for recording mining claims with the Bureau of Land Management, contained in the Federal Land Policy and Management Act, that require holders of mining claims to perform $100 of annual assessment work to maintain each claim. Currently there are approximately 1.2 million mining claims covering some 45.7 million acres of public lands. The budget estimates holding fee receipts will total $97.5 million in 1991.

As part of this proposal, the current annual assessment filing fee of $5.00 per claim will be eliminated. The current provision in the Mining Law for $100 worth of annual assessment work represented a significant amount of activity and expenditure when originally enacted in 1872. However, in today's dollars, $100 worth of activity has little significance as an indicator of commitment to develop and maintain a mining claim. In addition, questions have been raised about the enforceability of the annual assessment requirement. The 1991 proposal addresses these problems by replacing the assessment requirement with the annual holding fee.

The proposal provides both environmental and mineral production benefits. It will eliminate activities that result in surface disturbance of lands solely to maintain a claim. In addition, claimants who have no serious intention to mine, or who hold claims for speculative purposes only, may wish to relinquish claims rather than pay the annual holding fee. Since frivolous or speculative claims serve to limit the use of public lands by others, the holding fee proposal may in fact result in increased access to lands for multiple use, including mineral development.

National Water-Quality Assessment Program: The Department, through the Geological Survey, in consultation with other Federal and State agencies and with the support of the Congress, is proposing to implement a National Water-Quality Assessment (NAWQA) Program in 1991. The objective of the program is to describe the status and trends in the quality of the Nation's surface-water and ground-water resources and to provide a sound, scientific understanding of the primary natural and human factors affecting these conditions. The budget request for 1991 is $18.1 million, an increase of $11.0 million over the 1990 enacted level. The 1991 request will provide funding to complete the pilot program and begin a multi-year transition to a full-scale program.

Historic Preservation Grants: As part of the 1991 President's budget theme regarding the preservation of America's heritage, the request for the Historic Preservation Fund is $33.7 million, which is an increase of $1.4 million compared to the 1990 enacted level. This fund finances 50 percent matching grants to the States and funding for the National Trust for Historic Preservation for historic preservation planning, projects, and activities. The increase of $1.4 million in 1991 will be used to continue assistance to Indian Tribal preservation programs, begun in 1990, and to States for subgrants to preserve, restore, and rehabilitate properties listed on the National Register of Historic Places.

Indian Education: I have expressed my strong personal commitment to support the President's goal to promote educational excellence by incorporating this objective into my Stewardship agenda. The best opportunity for advancing this goal in Interior exists in the BIA where the Department's resources can be focused on addressing the educational needs of Native Americans and enhancing educational opportunities for Indian children to develop their talents and abilities to the fullest extent possible. The education budget is a substantial proportion of BIA's total budget, and in 1991 the request is $313 million, a net increase of $18.8 million.

The BIA, in carrying out its educational responsibilities, funds 166 elementary and secondary schools which serve 38,105 students in 23 states. The Bureau also operates 14 dormitories for 1,686 students attending public schools and two post-secondary schools; funds higher education scholarships in fields like education, business, health and law; and provides financial support to 22 Tribally Controlled Community Colleges (TCCCs).

The Bureau's major long-term goal is to raise the educational achievement levels of Indian students in BIA-funded schools to levels that meet or exceed national norms by the year 2000. Towards this goal, BIA is requesting $13 million in new funding in the 1991 budget. This increase supports the following objectives which form the cornerstones of achieving BIA's long-term goal:

- increase parental involvement in the educational process;
- improve accountability to parents, school boards and tribes;
- improve teacher performance; and
- establish high expectations for students' success.

These are the highlights of our 1991 budget proposal which are all aimed at improving the quality of the resources under the care of the Department of the Interior. We thank the Subcommittee for its continued dedication to and concern for our programs. I look forward to continuing to work with you on these and other important issues that confront us as we manage the natural, recreational, and cultural resources of the Department of the Interior.

PROTECTION OF WEST VIRGINIA'S CULTURAL AND NATURAL RESOURCES

Chairman BYRD. I thank you for your statement, Mr. Secretary, and the Interior Department, Mr. Secretary, is very important to the State of West Virginia, because we have such an abundance of the resources that the Department manages or has an interest in, including valuable national park sites, and wildlife and vast coal reserves.

So, the protecting and the enhancing of West Virginia's natural resources has been and will continue to be a priority for me, and I would like to see West Virginia become a higher priority within the Interior Department. I have initiated a number of projects in West Virginia to promote the use of coal, and to expand the National Park System, and create a wildlife refuge, and to establish a National Fish and Wildlife Service Training Center.

These are worthwhile projects, both for West Virginia and for the Nation, and for the Department, and they deserve strong Federal backing. Thus far I have had to carry the ball on many of these projects when it comes to Federal funding, and I will continue to do what I can, but my job would be easier if the Interior Department promised to provide more funding for West Virginia in its budget.

West Virginia offers a unique perspective of America's history and America's natural splendor. The Interior Department has a key role to play in West Virginia, and I hope that I can count on your assistance in bringing to fruition the many important projects that I have in the works for West Virginia.

FISCAL YEAR 1991 FUNDING REQUIREMENTS

I would like to begin our questions with an observation, and that is that during our hearing process this year the subcommittee has discovered a number of very substantial funding requirements for fiscal year 1991, which are not included, or not funded fully in the administration's budget request.

These items include, for example, funds for Alaska subsistence hunting regulation, the Kennedy Center maintenance problems, the Abandoned Mine Land Reclamation Program, firefighting costs, Alaska oilspill recovery costs, and increased law enforcement payroll costs as a result of the Federal Law Enforcement Pay Reform Act of 1990.

The subcommittee is confronted, then, with unbudgeted costs totaling $133.8 million for these items. Accommodation of these items will severely constrain the committee's ability to fund other programs and projects for which the administration has requested funding, and we certainly would be interested to know what your suggestions would be as to where the most appropriate reductions might be made among the items that are included in the budget request.

ABANDONED MINE RECLAMATION GRANTS FUNDING

As to the Abandoned Mine Land Program, specifically, the fiscal year 1991 request for AML reclamation grants is $117 million, which is $33 million, or 22 percent below the fiscal year 1990 appropriated level of $150 million. The revenues into the Abandoned Mine Land Program are generated from the tax that is levied on every ton of coal produced. Currently, coal operators pay in excess of $220 million into the AML fund every year. The States depend on funds provided through the AML Program to reclaim certain lands affected by past coal mining practices of companies that are now defunct.

According to the latest quarterly reports prepared by the Office of Surface Mining for the period ending March 31, 1990, the States are obligating their construction grant funding at a rate of 85 percent. The AML fund currently has an unappropriated balance approaching $600 million.

The inventory of remaining priority one and two projects is approximately $5.8 billion. With all that needs to be done, why is the administration again requesting a 22-percent reduction in reclamation grants to the States?

Secretary LUJAN. My understanding is that there is a certain amount of money in the pipeline already, consistent with what the States have been using before, and for that pipeline we just requested an additional $117 million to bring us to that level. It is not our intention to reduce the amount to the States to be used, but we had that in our pipeline already, but not necessarily obligated yet.

Chairman BYRD. What you are saying, Mr. Secretary, is that the large balance of the construction grants, $166 million has been appropriated, but not yet officially obligated by the States?

Secretary LUJAN. Yes.

Chairman BYRD. But I would say in response thereto that while not obligated, the vast majority of those funds are committed to specific projects, and I understand these reclamation projects can take up to 2 to 3 years from the planning phase through construction and certification. What is the rationale for denying the States sufficient funds with which to plan and complete new projects?

Secretary **LUJAN**. Well, Mr. Chairman, the States have been using an average of $175 million over the 5 years, and it was our intention to provide enough money to allow the States to continue the existing projects, with plans for the future. We just felt that there was enough money there. Perhaps Mr. Itteilag could expand on that as needed, but we felt that there were sufficient moneys for the existing plans.

Chairman **BYRD**. The point is, Mr. Secretary, with the vast majority of these funds being committed to specific projects, the States ability to plan in the future is inhibited.

Secretary **LUJAN**. I understand your point, and perhaps we need to relook at the issue. If it is not sufficient, we are not in any way trying to deny the States the opportunity to plan, and we will look at that closer in future plans.

AML EMERGENCY PROJECTS

Chairman **BYRD**. Well, we have been looking at it for over 1 year. The Department, for the second consecutive year, has requested reprogramming authority for emergency AML reclamation projects. The Department has requested approval of a proposed reprogramming of $6.5 million within the AML reclamation fund for emergency reclamation projects in Indiana, Kentucky, Pennsylvania, and Ohio.

The source of these funds will be prior year recoveries and unawarded funding appropriated for State AML reclamation grants from the affected States. The committee will have to make these States whole in the fiscal year 1991 appropriations bill.

In addition, by letter of June 6, the Department has taken the position that its request for emergency projects in its fiscal year 1991 budget justification is deficient by $6.3 million. So, the Department is proposing that all this money, $12.8 million, be taken out of the State AML grant funds in fiscal year 1991.

The effects of the Department's reduction in its fiscal year 1991 request, together with the proposed reprogramming, and we are talking about $33 million in reductions, plus reprogramming of approximately $6.5 million, and the admitted deficiency in its fiscal year 1991 request for emergency projects, which is $6.3 million, would result in a total reduction in fiscal year 1991 for the AML fund of $45.8 million, or 31 percent below the fiscal year 1990 enacted level.

As I have already indicated, this is the second year in a row that the Federal funds for emergency projects have been inadequate. And the Department now admits that the fiscal year 1991 request for emergency project funds is inadequate as well.

Now, how are the States expected to continue their reclamation work at such a greatly reduced level?

Secretary **LUJAN**. It was certainly not our intention to do that, and it is not our intention to inhibit any States, including the work that they must do.

ABANDONED MINE LAND PROGRAM

Chairman **Byrd**. Why should the States be expected to subsidize what are clearly poor planning and bad management practices by the Department?

Secretary **Lujan**. It wasn't the Department's intent to purposefully underbudget the emergency program in either fiscal year 1989 or 1990. In those years, unusually wet weather increased the emergencies in several eastern States. So, AML funds for emergencies were depleted and we had to consult with you and the House for a reprogramming of AML grant funds to cover the contingency.

Chairman **Byrd**. What is the reason for this consistent miscalculating by OSM?

Secretary **Lujan**. Prior to fiscal years 1989 and 1990, OSM was able to fund unexpected emergencies through the use of prior year carryover and recoveries in the AML fund. As the carryover and recoveries declined, OSM was less able to fund unexpected emergencies. Since emergencies are difficult to predict, and since budget projections are made close to 1½ years in advance, it's difficult to calculate in advance the probable needs.

Let me turn to Mr. Itteilag for those numbers in the budget, Mr. Chairman, and he might have some light to shed.

Chairman **Byrd**. All right.

Mr. **Itteilag**. The point which has been discussed with this subcommittee before and as you have already indicated, is that the obligation level simply does not in our view support an appropriation level higher than is in the President's budget.

Chairman **Byrd**. The obligation level doesn't, but future planning is needed, and so how can they proceed to plan and commit for the future?

Mr. **Itteilag**. That is the issue, Mr. Chairman, and I agree. The question is: Do we have to put money on the table, so to speak, in order for planning to go on? I guess I would have to say that we don't. If you appropriate, or if more money is appropriated, and the Congress has appropriated more money in each or the last several years, and the Department proceeded to use that.

But if more money is provided simply to allow States to do this planning, and that money otherwise sits unobligated, it simply means that other things in the Department that could be obligated on a more timely basis would not be able to go forward, because the money would not be available, on the assumption that——

STATES' OBLIGATION RATES

Chairman **Byrd**. How can they obligate the money if the Department did not make it available?

Mr. **Itteilag**. Well, Mr. Chairman, the question is: Can the States do adequate project planning without having money on the table? I would say that in my view they can. Then the question becomes that if we add more money to that, would the States then obligate it any faster, and the evidence it seems to me is that, given the large amount of unobligated balances that carry over each year, the States wouldn't. So, that is the nature of the debate.

I don't know if we have all the answers on this particular problem, but certainly some substantial increase in obligations by the

States from the current level would be the best evidence that I could think of for increasing the appropriation in future years. That evidence simply does not exist in any substantial amount.

Chairman BYRD. Well, the other priorities in the Department don't depend upon taxes to pay their costs.

Mr. ITTEILAG. That is true.

Chairman BYRD. The money is there, and why is the Department digging in its feet? Why do you continue to do this, and then you have to come up before this committee and answer these questions.

Mr. ITTEILAG. Mr. Chairman, I wouldn't say that the Department is digging in its feet.

Chairman BYRD. Well, that is the way that I characterize it, or dragging its feet. How about that? [Laughter.]

Mr. ITTEILAG. The fact of the matter is that the overall level of funding available to the Department at some point is relatively fixed, and if we were to have more money for this program, in all probability it would be offset by putting somewhat less money in other places where we also think we need more money, and where there are others who would say that we need——

Chairman BYRD. Are you saying that we can put the taxes—in other places?

Mr. ITTEILAG. No; I am not.

Chairman BYRD. Then what are you saying?

Mr. ITTEILAG. I am saying that in the context of budget negotiations, both within the Department and with the administration, and even in the administration's dealings with the Congress in such things as budget summit agreements, in the end there is a fixed amount of money available.

Chairman BYRD. Well, I am talking about this money, which is paid into this special fund. The States have already obligated or committed the moneys that they have, yet you want to appropriate less moneys than they need in order that they might continue to plan and obligate for the future. That is their money. That is not your money. It is not my money. It isn't the Federal Government's money.

Mr. ITTEILAG. As I said, Mr. Chairman, if there was substantial evidence of increases in obligations on a quarterly basis, then the case could more easily be made to have a larger appropriation.

Chairman BYRD. Well, your Department cannot obligate money that we don't appropriate, nor can the State. I don't think we are getting anywhere.

Secretary LUJAN. Well, we will look at that very carefully.

MAINTENANCE BACKLOG IN THE DEPARTMENT

Chairman BYRD. Let's look at it carefully. Perhaps there are ways that we can help get some of it turned loose. I know that some of my colleagues wish to ask questions on other matters, and I will ask a couple of additional questions and then I will turn to them.

During the subcommittee's hearings with Director Turner, of the Fish and Wildlife Service, it was very apparent that even with the enhanced budget request levels for maintenance of our national fish hatcheries, the National Wildlife Refuge System, and the research facilities of the Service, we would still be losing ground to the maintenance backlog.

Director Turner, for example, indicated that the Service would need an increase of $50 million, or 200 percent, to simply stay abreast of the annual maintenance requirements in his organization alone. Is this situation typical of other agencies in your Department?

Secretary LUJAN. Well, Mr. Chairman, as you know, I never have had an agency come to us and say that we have enough. I just don't believe that will ever happen. We have tried to address that, Mr. Chairman, with the President's program of America the Beautiful, and we have a substantial increase for upkeep. In fact, we have that for Legacy '99 to catch up with any backlogs that we might have, and we recognize, Mr. Chairman, that we are falling behind. Of course, within the budget constraints——

Mr. ITTEILAG. And on Legacy '99, the increase is $113.5 million, as compared to fiscal year 1990, and within the Fish and Wildlife Service, while it is true that we have not reached what we would consider an optimum amount as the chairman has already suggested, there is a $3 million increase. This is the first substantial increase for the Fish and Wildlife Service in this category in the last 4 or 5 years, and the Department is committed to the Legacy '99 initiative over a long period of time.

So, while the situation is less than what it could be, I think there is ample evidence that we are moving in the right direction.

Chairman BYRD. Do you have any thoughts on how the subcommittee might most effectively address these very demanding maintenance needs at a time of very constrained budgets?

Secretary LUJAN. Well, other than the appropriation process, I would not know what to recommend to the committee. I do believe, however, that the amounts that we asked for under the America the Beautiful Program should be considered positively by the committee.

BLM MAINTENANCE NEEDS

Chairman BYRD. BLM's fiscal year 1991 budget request is proposing a maintenance increase of $13.2 million above the fiscal year 1990 level, and I am told that BLM does not have an up-to-date appraisal of its facility needs, and is conducting an inventory of its facility needs at present.

A ball park backlog estimate which BLM has supplied to the committee during our hearing this year is $80 million. How do you know whether BLM is staying even with its maintenance needs or whether its backlog is being increased or is being reduced if BLM does not have a current inventory?

Secretary LUJAN. Well, we estimated for those two programs as I say, Mr. Chairman, in 1989. In seeking those increases we estimated what we might need, and while you are correct that we may not have an exact figure on that, our goal is that within the next 9 years to catch up on that. We have a $2 billion backlog, Mr. Chairman, for all of the——

Chairman Byrd. BLM representatives said that they did not know what their backlog needs were, and they had never taken an inventory.

Secretary Lujan. Well——

Mr. Itteilag. Mr. Chairman, there is an ongoing effort within BLM to develop what we commonly call a maintenance management system, which is a kind of system that the Park Service and that the Fish and Wildlife Service already have. That effort is well underway, and while I remember the testimony with respect to BLM in terms of estimating the backlog, let me say that, when we were putting this budget together, we found that the Bureau of Land Management was very, very capable of articulating their backlogs and their requirements, and very conscientious and I would say successful in defending their budgetary requirements.

I think their budget request in this area is well-founded, and in part this is the result of the fact that in the several years prior to this, we probably did not ask for sufficient moneys for BLM. Mr. Chairman, the Director of the Bureau of Land Management, Mr. Jamison is here, and I don't know whether he would like to make any further comments on this.

INVENTORY OF THE BLM MAINTENANCE BACKLOG

Mr. Jamison. Thank you, Mr. Chairman. I agree with everything that Mr. Itteilag has said. I have been with BLM for approximately 1 year, and we have been developing that system, and I think that probably the numbers are on the low side.

Chairman Byrd. How do you know that? Is that a guess? You don't have an inventory.

Mr. Jamison. We have not done a formal inventory of the BLM compared to the other agencies, sir. We are trying to bring that up to a formalized process, where it is consistent throughout the BLM. I am comfortable, as Mr. Itteilag is, that the numbers are there that we can support.

Chairman Byrd. Well, you are comfortable with them, but what do you have to document them?

Mr. Jamison. The best of information that I have is that we have detailed projects in from each State outlining what they are doing, and we can get you some additional information if you would like us to.

Chairman Byrd. Do you plan to conduct a BLM inventory?

Mr. Jamison. It is in process right now.

Chairman Byrd. When will it be completed?

Mr. Jamison. I can't tell you exactly, sir, but I would say by the first of the year we will have it done.

Chairman Byrd. What actions will be taken once the inventory is completed? Will a facility maintenance plan be developed?

Secretary Lujan. The BLM is in the process of completing and automating their facility inventory and is also performing condition surveys that will portray maintenance needs for each facility. A maintenance summary from these data can then be provided to enable each BLM district to develop a maintenance plan. This plan would establish maintenance priorities and budget needs based on the current condition status of each of our facilities. The BLM's maintenance management system is scheduled to be operational by December 1990.

Mr. ITTEILAG. Mr. Chairman, there is a difference between putting all the information together on the one hand in some sort of a computerized system and having one's priorities in order, compared to what information is already available at the State and district level.

For example, last year I had the opportunity to visit the Medford, OR, district office, and spent a good bit of time with the director of that outfit, and he was able to give me a list in priority order, priced out and up to date, and show me so that I could see actually what were the problems there.

And so I think that the data, while it is not organized in the most up-to-date and contemporary fashion with respect to automation, is, in fact, available and the product is up to date.

MAINTENANCE BACKLOG OF THE NATIONAL PARK SERVICE

Chairman BYRD. Mr. Secretary, I would encourage you to catalog all of the maintenance needs throughout the Department, and then to establish a systematic process for ranking these needs in terms of funding priority as you just mentioned. We narrowly missed a disaster in the Glen Echo parking lot last year.

Park officials indicated at that time that they did not have adequate maintenance funds to repair what was a known flood threat at that location. That is just one example, but I would hope that important health and safety problems would not languish on a long maintenance backlog list. The committee added funds for maintenance improvements in the fiscal year 1990 Interior bill, and I salute your enhanced funding efforts in this year's request, and I suggest that you proceed to catalog those maintenance needs.

Secretary LUJAN. We have tried to address that, Mr. Chairman, and we will continue to do so.

LAND ACQUISITION POLICIES

Chairman BYRD. I would like to turn briefly to Federal land acquisition policies. Secretary Lujan, agencies within your Department, in addition to the Forest Service, are requesting a combined total of $250 million for land acquisition expenses from the Land and Water Conservation Fund. I note that 21 percent of this total falls within California.

Why is the administration requesting such a disproportionate amount of the total for one State? Are there selection criteria which bias the project acquisition priorities in favor of some States and not others?

Secretary LUJAN. Well, Mr. Chairman, we have a rating system that we submit to the subcommittee and to the Congress every year, and that rating system brings up the particular parks where we want to acquire property.

For this year, as you know, the President made two very important requests. One is that we look more favorably upon urban parks, parks close to large populations. We assigned high points to them in our priority system. The other area was wetlands, and it is these two factors, not geographic distribution, Mr. Chairman. We don't plan geographic distributions. We have a rating system, a priority system, that we submit as a matter of fact to Congress and to you for your approval, and Congress has agreed with us by and large.

STAFFING LEVELS IN OSM

Chairman BYRD. Turning to another matter in the Office of Surface Mining. In a report, dated April 28, 1990, the Department's inspector general concluded that the Office would experience a funding shortfall of $4.2 million in fiscal year 1990. One of the primary reasons cited in the inspector general's report was the fact that OSM had 78 more full-time equivalent positions than allocated by the Department or funded by Congress.

Could you explain how this happened, and what specific steps you are taking to respond to the inspector general's recommendations to correct this situation and to ensure that it does not occur elsewhere in the Department?

Secretary LUJAN. We are aware of that, and as a matter of fact, our new director made plans to have a reorganization that is in progress. We have a freeze on new employees, and we are, of course, aware of it, and are very concerned. It is a subject of many, many conversations that we had, and we are working on it. We will submit our reorganization plans to you. You have approved some already, and others are still pending because you had some questions. We are working on that and we are very concerned about it.

Chairman BYRD. Could you explain how this happened, and what specific steps you are taking to respond to the inspector general's recommendations to correct this situation and to ensure that it does not occur elsewhere in the Department?

Secretary LUJAN. Yes; and let me turn to Mr. Gallegos for the specifics.

INSPECTOR GENERAL REPORT

Mr. GALLEGOS. Mr. Chairman, the fact of the matter is that the dysfunction in the Office of Surface Mining was discovered by OSM itself. They are the ones who requested the inspector general to take a look at that both factually and objectively. The inspector general's findings suggested that it was a problem. The Director has taken a number of steps to correct it. These include: a reduction in force effort, and a very austere budget proposal to, and get down to an acceptable level of staffing. Most of the money that had been used out of that fund had been used to increase staffing over the years.

This is not something that just occurred recently. This is something that had been occurring for a number of years, resulting in the diminishing use of that fund from $16 million to approximately $1.3 million today.

Secretary LUJAN. Mr. Chairman, I have been looking up some information on that, and one of the things that we were concerned with and are addressing is reducing the management layers throughout all of our field offices. We want to have some of them report directly to the Washington office rather than having so many people in the field, such as in the Appalachian field office, in Lexington, KY. We are moving that information here.

We submitted some reorganization plans to you, and we have not received the full subcommittee approval yet, but we expect to. We are working on that.

SCHEDULE C APPOINTMENTS

Chairman BYRD. Your OSM budget office has indicated that one of the most difficult costs for OSM to cover will be the $444,000 for the salaries and benefits for nine Schedule C employees. Five of the nine were brought on early in the first quarter of fiscal year 1990, and this was about the time that OSM realized that it would experience a shortfall in fiscal year 1990.

Could you explain why these people were hired given the obvious budgetary problems which confronted OSM?

Mr. GALLEGOS. Mr. Chairman, the employees were hired long before we knew of budgetary problems. We also made a commitment to the House subcommittee that we would take steps to reduce the number of Schedule C employees to the Office Of Surface Mining.

Chairman BYRD. All right. I will submit the rest of my questions for the record, and I would recognize Senator McClure.

PRESIDENT BUSH'S OCS DECISION

Senator MCCLURE. Thank you very much, Mr. Chairman, and I will not try to repeat all the questions that have been raised and answered in the authorizing committees, even though some of them are still current, but I do want to share some time with the other members of the committee. However, I am very much concerned about the President's OCS leasing decision, because you know and I know what the statistics are about national energy and self-sufficiency and our growing dependence on foreign oil and climbing rates for oil and gas, and I think it is down 38 percent in crude oil production in the lower 48 States.

Our dependence on imported oil has now risen to over 50 percent and is on the predicted curves of two-thirds dependent by the late 1990's. Natural gas wells completed last year were less than one-half the number completed in 1981.

And if you look at all of those trends, they are all down, and they are all getting worse, and I know that the administration is engaged in trying to develop a national energy strategy, and I commend the administration for doing that, but is it correct to assume that in view of the President's recent decisions that OCS oil and gas programs will not play a significant role in the national energy strategy?

Secretary LUJAN. No; it is not fair to say that. What we are trying to do, of course, is to respond to the National Academy of Sciences studies, and—and since we are on that subject, let me say that there are a number of issues involved there. One, of course, is the moratorium.

Senator MCCLURE. Well, Congress will be asking——

LEASE STUDY AREAS

Secretary **Lujan**. There is no question about that, and what the President tried to do was to establish a rational policy of studying those areas that need to be studied. We put those off so that they are not studied until our next 5-year cycle. I would hope that Congress would resist any efforts for any additional moratoria. We need to use the resources that God put on this Earth to use.

Senator **McClure**. Well, I agree with your latter statement. I don't see—and there is a perception that we don't know enough about anything, and therefore, we have to study it, and with your suggestion, we need to go back and study it for 20 years.

Secretary **Lujan**. Well, I might tell you that I was rather disappointed with what the National Academy of Science did, and I had hoped that they would be able to tell us that you can drill here, and in an environmentally sensitive manner, and here you should not, but they recommended more studies.

Senator **McClure**. Do they ever do anything else?

Secretary **Lujan**. No.

Senator **McClure**. Do we ever do anything else? Both you and the Congress are incapable of making decisions.

Secretary **Lujan**. We have said that there are——

Senator **McClure**. The only decision you have made is to—or that has been heard is to study it more and not to do it now. Let's not do it now and let's wait a while.

Secretary **Lujan**. Well, the President did make recommendations that there were two areas of potential that we can lease in a rather extensive matter, and that is Santa Barbara County, and the Santa Maria Basin. Now, we already know about the environment in those areas, but we were trying to work within a framework where we know that we can proceed in these two areas. I hope that you folks do not under any circumstances accept any more moratoria.

MINING FEES

Senator **McClure**. Well, let me shift for a moment to a question of mining fees. In your budget request for BLM, the administration proposed the establishment of a holding fee of $100 for each mining claim. That would replace the current BLM filing fee of $5 per claim for annual assessment, as well as the current requirement to perform 100 dollars' worth of annual assessment work.

According to budget analysis, this is expected to raise $97.5 million in revenue. Of these funds, $21 million will be used to offset the costs of the mining law program.

The justification indicates that one of the motivating factors of this proposal is to reduce the number of claimants who have no serious intention to mine, or hold their claims solely for speculative purposes.

How did the Department determine that 975,000 claimants would be willing to pay the fee?

Senator **Reid**. Studied it. [Laughter.]

Secretary **Lujan**. I did develop those figures, but——

Senator **McClure**. Somebody did.

Secretary **Lujan**. But I think that one estimate is as good as another.

Senator McClure. Or, as bad?

Senator Bumpers. They pay to rape or pillage; that is what they did.

Senator McClure. The figure is not 975,000, but 10,000.

Secretary Lujan. Well, that is a ball park figure.

Senator McClure. One figure is as good as another you said.

Mr. Itteilag. Senator McClure, it is reasonable to say that the program experts from the Bureau of Land Management thought what their best estimate would be if this proposal were to be approved by the Congress. That is the figure that they came up with. It was not a number that was imposed on us by anybody outside the Department, and it was not a number that was simply pulled out of the air.

We asked the experts in the Department, and those were the people we would ordinarily ask, and that is the number they came up with.

Senator McClure. What was their rationale?

Mr. Itteilag. I don't know.

Senator McClure. Do you have any idea how they developed that figure?

ESTIMATING REVENUES

Mr. Itteilag. Perhaps Mr. Jamison could answer that.

Mr. Jamison. Senator McClure, the one rationale that we did use was that we estimated what we thought were speculative claims.

Senator McClure. And how do you identify a stake for these claims?

Mr. Jamison. These are the field folks that told us approximately 10 percent are speculative in nature, and they are in it for other reasons other than mining. That is the number we got.

Senator McClure. Well, it came from a 10-percent estimate?

Mr. Jamison. Yes; that is correct.

Senator McClure. Which maybe is as good as any other?

Mr. Jamison. That is correct.

MINING CLAIM HOLDING FEE

Senator McClure. At least that is better than saying it came out of the air somewhere. If I understand your proposal, and I think I do, the holding fee is a substitute for assessment work, and assessment work is totally eliminated; is that correct?

Secretary Lujan. It has two advantages really. It is easier to keep track of, and the other is that you don't have to go tear up the countryside for assessment work, yes.

Senator McClure. But it also says that if a person is seriously interested in developing a claim, he has an additional $100 expense?

Secretary Lujan. If he is seriously interested in developing the claim, that is correct.

Senator McClure. So, the one person who is most serious is the one that gets penalized?

Senator Bumpers. Will the Senator yield for a question on that point?

Senator McClure. Yes.

Senator **Bumpers**. I don't know how you reach the conclusion, Jim, that you are trading a $100 fee if the Secretary says it is easier to keep up with, and in the past these people simply make a sort of assessment. I mean, they make some sort of justification to show that they spent $100 each year on each claim they hold.

Now, if they had been honest in actually expending $100 of assessment work each year, how are they any worse off by paying a $100 fee and not going out there and digging up the ground just to prove——

Senator **McClure**. You missed or didn't hear what I said, I think, Dale. I said a person that is really interested in the development of his claim is out there doing something in the development of the claim, and he is making the expenditures, and he will have to then pay a $100 fee, in addition to making the expenditures.

Senator **Bumpers**. What is the average age of the claims; do you have any idea?

Senator **McClure**. Well, some are old and some are new.

Mr. **Jamison**. That is correct. Since the mining law started——

Senator **Bumpers**. If you take some guy who has had a claim out there for 20 or 30 years, what justification do we have for saying that this guy is serious?

Senator **McClure**. Well, that is a different question from the one that I asked, and that is to say that there is a fellow out there who has located an interim, and he is interested in developing a mine somewhere, and there is no offset for that activity it seems to me.

Secretary **Lujan**. Well, Senator, he is going to pay a lot more than $100 a year on the claim. Some are going to spend in the millions of dollars, and $100 is going to be a very small amount.

PAYORS OF MINING CLAIM FEE

Senator **McClure**. Some will spend in the millions, Mr. Secretary, and some don't have that kind of money. Some are your constituents. Some are in New Mexico, and some are mine in Idaho, and some are poor. They are not the big outfits that we are talking about here.

The big outfits could care less about a $100 fee per claim, unless they are indeed, as they are in the State of Nevada, speculating all over the State with claims, they are truly speculative, and I know what you are trying to deal with when you deal with that kind of question, and I want to help you do that.

But at the same time, I want to help you, and help those that are developing a claim to the point where he can then either mine it himself, or sell it typically out to a larger mining operation that will spend millions of dollars if necessary that he doesn't have. It is that group of very honest and hard working people that I find to be penalized by this kind of a proposal.

I would hope that we might be able to find a way to offset where there is the actual expenditure, and what we are trying to do is to avoid the person holding it without making any expenditure, sure, and we are trying to say in those areas, hey, it is better to collect the $100 than it is to require—and I have advocated that for 20 years around here, and I have not been able to get the appropriate committees in Congress yet to agree with me on it.

But there are some things that we can do and that would be environmentally sound and prudent management of our resources, and at the same time it would make your administrative job easier, and I find myself in agreement with most of your proposal, but it is just in that one area where I have a little difficulty with it.

Secretary **LUJAN**. We might be able to work out something where we give them credit for the $100.

Senator **BUMPERS**. Now, Mr. Secretary, don't start giving away the store here. [Laughter.]

Secretary **LUJAN**. No, no; if they discover something, and it is a legitimate mine, and becomes a legitimate mine, then we can give them their $100 back.

Senator **MCCLURE**. I would say that the chairman doesn't really trust you to give the money back. [Laughter.]

Let me ask just one further question, and then obviously I have a number of others, but I do respect the desire of other members to ask questions here this morning, and I know that several are here that have that in mind.

CLEAN AIR ACT ENFORCEMENT RESPONSIBILITIES

We have a conference between the House and the Senate today on the Clean Air Act, and one of the proposals before the conference was regarding the transfer of responsibility for enforcement of the Clean Air Act on Outer Continental Shelf activities from the Department of the Interior to the EPA, with respect to the monitoring of offshore standards.

If I understand correctly, and I think I do, the administration's position is that they are opposed to that kind of transfer; is that correct?

Secretary **LUJAN**. That is correct.

Senator **MCCLURE**. Have you actively talked to the Congress with respect to that particular issue in conference?

Secretary **LUJAN**. We have. As a matter of fact, we submitted a letter to EPA stating our position on that issue. Barry Williamson has been working on that, and he is the head of the Minerals Management Service, and he might be better able to fill you in on that.

Mr. **WILLIAMSON**. Secretary Lujan and Mr. Reilley discussed this issue with the Senate during the Clean Air Act negotiations. We came to an agreement with the Senate that the administration supported and Secretary Lujan and the Administrator of the EPA supported. Basically, the agreement was based on one foundation, and one premise.

That premise was that California's regulation of air quality offshore should be similar to air quality onshore, and while it is very strict from an energy standpoint, we supported that agreement. We think that offshore regulation should be as stringent as the onshore regulations, and that the Senate provision takes care of the environmental issue.

The question now is should the transfer go forward. That is an administrative issue, and does not deal with the environmental issue. The environmental issue has been taken care of under the Senate negotiations.

Senator **McClure**. I have a concern about that, and am as concerned as you are, and for a whole variety of reasons, but I will guarantee one thing. If the State of California gains control of the administration of the OCS activities, nearly two-thirds of my State are administered by the Federal Government, and one-third of it, of my State, is administered by the BLM; and if you are going to give the State of California control of the OCS activities, then I am going to be pushing as hard as I know how to push to see that Idaho gains control over active leases on the BLM lands.

Senator **Stevens**. Amen.

Senator **McClure**. Thank you.

Senator **Bumpers**. Senator Reid.

LAKE TAHOE BASIN SUSCEPTIBILITY TO FIRE

Senator **Reid**. Thank you very much, Dale. I appreciate that, Mr. Chairman. Secretary Lujan, we have problems in our State, the State of Nevada, that prevail all over the West, and I just think that ours is a little more pronounced, and that is the problem of drought that we are having in the Lake Tahoe Basin, where about 50 percent of the trees in the Tahoe Basin are dead.

A lot of people live in the Tahoe Basin, and we are very, very concerned about fire, and the programs that are now in existence to move the dead timber, and to in effect make it so that it is not a tinder box. These programs are moving very slowly.

I would ask if you have someone with you today who can tell us what is happening with respect to the BLM's firefighting role.

Secretary **Lujan**. Yes; we have Cy Jamison, who is the head of the BLM.

Senator **Reid**. I think that most of that is Forest Service, but I would like to know what the BLM is up to.

Mr. **Jamison**. Yes; the Tahoe Basin is under the jurisdiction of the Forest Service. On fire suppression, we are updating the support that we have, and we have the Boise Fire Center, that can give all the suppression support that you need.

But, for on-the-ground management of the Tahoe Basin, it is the Forest Service.

Senator **Reid**. We are concerned not when the fire starts. We know that with the huge amount of people that come there every weekend that this is just a touch and go situation. I am wondering if someone could give me a call, you know, soon.

Mr. **Jamison**. I will look into that, Senator.

STILLWATER REFUGE

Senator **Reid**. OK. Because we are very concerned about fire prevention. I get calls almost every day, and Nevadans are very, very concerned.

You have received this morning, as happens with these congressional hearings, some criticism. I would like to throw the Department a bouquet. I think it is commendable that the administration has recognized the need to do something about the wetlands, and rather than talking in generalities, have specifically put money into the Fish and Wildlife Service budget to do something about one of the really important wetlands that is being destroyed by man, and that is Stillwater.

The President has put $2 million in the budget this year, for which we are very grateful. That area will be saved and will be part of the Great North American Flyway, and so while I have some things that I could be critical of, I want to throw you that bouquet, because of efforts on behalf of Stillwater.

NEWLANDS PROJECT

I think Stillwater is an example of what can be done throughout the rest of the country in saving wetlands. Also, while we are talking about things that are positive, I think the work that your Department has done with Senate Bill 1554, which deals with the problems that have been ongoing for some 80 years or more dealing with water between California and Nevada, and the newlands project, and the problems with endangered species, and the Cui-ui fish, and the Corps of Engineers, is commendable.

We have a real mess in Nevada, and the Department of the Interior has come a tremendous way in the last 3 or 4 months in working to get a bill that can be reported out of committee. We would hope that the bill will be reported out of the full Energy and Natural Resources Committee, maybe even next week.

The Department has done some constructive work in coming up with a bill that can be reported, and I would say that, as it happens, the Department may be a little too cost conscious, because I think that there are some savings that would come in the long run by putting some money—more money there.

INDIAN GAMING COMMISSION

Last, Mr. Secretary, could you bring me up to date on how we are coming with Indian gaming?

Secretary **Lujan**. First of all, let me comment on these grievances that you are talking about in Stillwater and all of those. I just have to tell you that in that one in particular, we have a gentleman, Bill Bettenberg.

Senator **Reid**. He has done great work.

Secretary **Lujan**. And I must say that he is responsible for that, for the negotiations, and has done a real good job.

Senator **Reid**. I should have mentioned his name, because he has been present from the first time we had a hearing on this, and where he literally knew nothing, and he was just thrown into the program. Now he is an expert on this area, and he has really done some fine work.

Secretary **Lujan**. On Indian gaming, we have appointed the chairman——

Senator **Reid**. Hope.

Secretary **Lujan**. Yes; Tony Hope, and he is the chairman of it, and we have submitted the names of the other two commissioners. We know that they have to go through a long process of clearance and those types of things, and Mr. Hope is in the process of putting together the regulations, and we will be moving forward on that shortly.

Senator **Reid**. That you, Mr. Chairman.

Chairman BYRD. Senator Stevens.

ALASKA SUBSISTENCE

Senator STEVENS. Thank you, Mr. Chairman. Mr. Secretary, we do welcome you back, and it is nice to see you. I have just come back to Washington with a very heavy heart as you know, because we have not been able to convince our State legislature to allow people in Alaska to vote on the question of restoring the law of our State, and the Supreme Court ruled that it was unconstitutional, and it had to preserve the balance that is required by Federal law, in terms of rural residents—and fish and game resources on Federal lands.

We still have the principal that all 50 States manage the taking of fish and game on Federal lands, except for Alaska now, because of Federal law in another category, and you were required to take over it and manage it.

I have been advised that you are now going to be managing the fish and game activities on about 240 million acres, and with regard to the parklands, to include national park preserves, where hunting is allowed generally. The Department has decided that it would not allow a person to fly and hunt.

ACCESS TO PARKLANDS

In other words, there would be no access to the parklands by air. I have read the regulation and that is what it says. I am a little worried about that. That is contrary to the position that has been taken by our State, because the areas that we are talking about is some 50 to 2 million acres, and for the most part, these areas are not accessible by roads, and not accessible by any scheduled aircraft.

If you are going to hunt in Wyoming, you can fly in by commercial airlines, but you can't fly in your own plane that same day, and as I understand it in Alaska, you can't fly at all. There will be no air access for hunting in the parklands now. Am I correct on that?

Secretary LUJAN. I don't know.

Mr. GAYER. Mr. Secretary, I can offer information on that.

Secretary LUJAN. All right.

Mr. GAYER. Senator, I am David Gayer, of the Solicitor's Office, for the U.S. Department of the Interior. The current regulations do not change the status quo on the issue of aircraft access to parks and park preserves for hunting purposes. What they do is continue the existing regulations in place, which the Park Service has had on the books since 1981, regulations that do place very severe restrictions on aircraft access to the parks. The new regulations do not change that.

Senator STEVENS. Well, this may not be the time to get into it, as this is a very esoteric argument, but our State refused to accept the Park Service regulations when it had management of fish and game and did allow access to all areas under its jurisdiction by air.

And the Park Service has had in place the regulations you have indicated, which we have not enforced, because under the Federal

Law the right to have those regulations was suspended if we maintained the State Law.

Now, I think that you are correct that you have regulations in place, but they have never been effective nor enforced before, and I am not sure how many people in Alaska realize that they are not going to be able to fly and have access to hunting on parklands because the park regulations have been in effect before and are now triggered under your management.

I would urge you to check that now, because the hunting season is coming on, and it is our judgment, the State's judgment, that your regulations, which as you stated, have been in effect, but were not enforced by the State, are now going to be enforced by you. If that is the case, these are not the same hunting circumstances that there were before July 1.

Secretary **LUJAN**. Senator, let me say this in regard to that question, and certainly we will look into that, but what has created this whole problem is that we don't have a management device which the State can operate. Now, the State had objected or not recognized the regulations of the Park Service, and the Fish and Wildlife Service, in managing the game, also ignored the Park Service, and we find ourselves in a little different position.

And I am not trying to disagree or be disagreeable with you, but that is the position that the State has placed us in.

Mr. **GAYER**. That's why you wanted the State to pass a constitutional amendment.

STATUS OF FEDERAL REGULATIONS

Senator **STEVENS**. I understand that, and I thank you for that support, but what is going to happen, and I don't want to belabor this too much, but it is very serious now for us. What is going to happen now that the constitutional amendment has not been raised before our people? Are you going to start the process of permanent Federal regulations? What can we expect here in terms of the transition?

Secretary **LUJAN**. Well, we are. You know, we have no choice but to look at the fact that we now have to do the enforcement. We have—these are permanent regulations, and for 1990 we are asking for $3.5 million for enforcement, and for the 1991 budget we are requesting $17 million, I believe, and so we are proceeding as if we have to do it for the rest of our lives. It is causing us a lot of problems and we believe that the State is in a better position to do this, and should do it, but we are forced to do it.

And I must say that we have those responsibilities and that we are going to have to take a look at an enforcement mechanism or mechanisms that are happening outside of the area that we have to manage, and see how they affect—and so it not an easy thing, and it really makes it a lot more difficult.

Senator **STEVENS**. Well, I am trying to find out who precisely is going to be affected by these new regulations. Can you tell me this. I understand that under the Federal law, as you develop these permanent regulations you have to follow the advisory statutes, and that there will be a requirement that these advisory councils that you will establish will include all points of view on any particular management issue. You are going to have to have on these councils the antihunting groups; is that right?

Secretary **Lujan**. We have to have a balance there, and——

Senator **Stevens**. It is required by law; is that right?

Mr. **Gayer**. Yes; and——

Senator **Stevens**. That is what I am trying to get to now, and I am sorry to interrupt you, Mr. Secretary, but our State council is an advisory council now to you for this period of time; is that right?

Mr. **Gayer**. Right.

Senator **Stevens**. And do I assume that you retain the right to use just advice rather than use the State regulations as the regulations for this period?

Secretary **Lujan**. I don't know. We are proceeding very carefully on this. We don't want to impose on Alaska too harshly. On the other hand, it is going to be a little difficult. I sit practically every day with the Solicitor's Office trying to work this thing out and see just what my responsibilities are. We are working on this, and we will work it out.

FIRE BREAKS IN ALASKA

Senator **Stevens**. Well, I do thank you for your attitude, and I hope that there is some way that we can work this out, and maybe there is some way that we can ask the authorizing committee to help you do it, and see if there is something that can be done about it, and I don't know what Congress will be doing about it.

Let me shift to another subject, Mr. Secretary, and I think that other people may have the same problem. This committee will remember that I have come several times and asked for moneys to create fire breaks in Alaska, and I remember that I particularly asked for money around Glen Allen and Tok, and around Fairbanks.

The preservationist groups of the country have opposed firebreaks in the public lands, such as in my State. Now, we have over 1 million acres burned and we estimate that your cost of fighting fires in Alaska have gone up from an annual cost of some $15 million to probably $60 to $75 million this year.

We have had to evacuate many areas and have had substantial loss of Government property this year, as well as personal homes. Is there some way now that we can look in the future and restore firebreaks. In days gone by, firebreaks were common throughout the West, and all but one of the fires I am informed could have been controlled with firebreaks this year.

Now, this policy needs review, and I would hope that this committee, and the Interior and Energy Committees would both take a look at it, but what do you see as far as the ability of the Interior Department to now reach out and try to take some prevention action instead of waiting for these horrendous fires to develop?

This is about the third year of this decade that we have had substantial fires in Alaska, and we know that there was a big fire in Yellowstone, and we have other fires elsewhere.

Secretary **Lujan**. I applaud your commentary. It is very well taken, Senator, and we are concerned about that as you know. We have had ongoing firebreak policy and management review, and some changes have been made, but not all changes have been made. We will look at it.

Senator **Stevens**. Well, Mr. Chairman, once again I would ask the committee to look at it. I am afraid that firebreaks are looked at as being—from some portions of the country as being sort of labor creation devices, you know. Take local people, and hire them to go out and cut down these areas and maintain the firebreaks.

I still believe though that they are cost-effective Federal policies that ought to be pursued, and we are sure going to pay for the Alaska fires this year for these horrendous fires.

And I do want to thank the Secretary for all you did to turn loose of all of the Department's facilities and systems in Alaska to save lives and help prevent loss, and Tok, by the way, is the entrance to Alaska along the Alaskan Highway, and that is where the substantial Government agencies are, such as Customs, and the BLM, and the Park Service offices are located in that area, and they were all seriously jeopardized by this fire. Thank you very much.

Chairman **Byrd**. Senator Bumpers.

FLOODING AT HOT SPRINGS NATIONAL PARK

Senator **Bumpers**. Thank you, Mr. Chairman. Mr. Secretary, first of all, I don't see Mr. Ridenour here, but I wonder if you are familiar with the problems that we had in the Hot Springs National Park as a result of a really devastating flood down there?

Secretary **Lujan**. I am not personally, no.

Mr. **Itteilag**. Senator, we have—we are familiar in a budgetary sense. In other words, the Park Service has given us some preliminary budgetary information, and they say that they are going to come back to us with a more definitive estimate.

Senator **Bumpers**. Well, I would like to get that before we mark this bill up, because they have a new problem, and that is asbestos. With the exception of the visitors center, all the buildings were inundated, by those old asbestos covered pipes—asbestos is all over everything. They have now upped the ante by about $2 million as to what it is going to take to clean the mess up.

The Park Service probably has those estimates, and I have them, and so they certainly ought to have them.

Secretary **Lujan**. We will have some estimates coming in and will get back to you as soon as we can.

CONCESSIONS OPERATIONS IN THE NATIONAL PARKS

Senator **Bumpers**. All right. Now, Mr. Secretary, on the question of park concessionaires. You and I have visited from time to time about this, and I have a hearing scheduled July 25 in the National Parks and Public Lands Subcommittee on two reports; one by the inspector general, and by the GAO.

And you know that I am anxious, and I think you are, too, to revise the laws dealing with these concessionaires. We have a small problem with those reports, because some of the concessionaires say they contain proprietary information, and you are familiar with that?

Secretary **Lujan**. Yes; I am.

Senator **Bumpers**. And the court has so ruled.

Secretary **Lujan**. Yes, sir.

Senator **Bumpers**. We may be able to work that out before the hearing, but immediately after that hearing is it your intention to propose something for this session of Congress, or what is your present plan?

Secretary **Lujan**. Well, there are two things. First of all, let me generally comment on that. We have reviewed all of the contracts, and the averages of fees is 2½ percent, and there are a lot of reasons for it. I look at them in terms of both the concessionaire having a fair return, and the Federal Government having a fair return.

There are two things that inhibit competition. One is the business of possessory interest. We worked through that. I do have some proposals that we considered possessory interests, because I feel that they have been using the Government's money to fill things and they get a possessory interest.

The second thing is the preference that an incumbent gets. They have the right, as determined by the Park Service, to just match another bidder's proposal, and if they will just match it, they can retain the contract. I think we need to change that.

Then we need—and it does not need changing in the legislation, but we need to be a little bit more business like in dealing with those contracts, so that there is a fair return to the Federal Government, but at the same time you don't want to lessen the opportunity for a profit to a good concessionaire, because we have to depend on them.

Senator **Bumpers**. These possessory interests——

Senator **Leahy**. Dale, would you yield just for a unanimous consent request?

Senator **Bumpers**. Yes.

Senator **Leahy**. I have just been called, and I have to go and vote in another committee, and I would just ask for unanimous consent in case I don't get back to submit both a statement for the record on the spotted owl, and a number of questions, including the Lake Champlain initiative.

Senator **Bumpers**. Well, since the chairman is not here at the moment, I will grant you your unanimous consent. [Laughter.]

Senator **Leahy**. I can't tell you how indebted I am to you. [Laughter.]

Senator **Reid**. I object. [Laughter.]

Senator **Bumpers**. The objection is heard. [Laughter.]

[The statement follows:]

STATEMENT OF SENATOR PATRICK J. LEAHY

Today, the management of our Nation's forests is at an important crossroads. In many places, we have practiced frontier forestry—cutting as if a limitless supply of timber will always remain. But our old growth is fast disappearing. We cannot wait for it to disappear altogether before we move from a frontier to sustainable forestry. On old growth, we need leadership from the administration. It is a tough issue requiring foresight and courage to see it through.

On the spotted owl, the administration had the chance to lead—to make the tough decision—but failed to do so. First, it decided to list the spotted owl as threatened but not to describe until later how to protect it. By trying to make environmentalists happy while saving the hard news until later, the administration tried to avoid the tough decisions and bypass its own scientists' advice on protecting a threatened species.

Then, on the day it was to announce the details of the endangered species designation, the administration effectively delayed the decision for 2 more years while it draws up a management plan.

Mr. Lujan, I sincerely share your concern for the economic health of northern California and the Pacific Northwest, however, I am afraid that by putting off a tough decision now, it will only make a difficult problem worse.

Thank you, Mr. Chairman.

MINING LAW OF 1872

Senator BUMPERS. Mr. Secretary, the ordinary layman who reads Jack Anderson and sees that the concessionaires took in $500 million last year, and that the Federal Government got $11 or $12 million. You can imagine what their reaction is when they see that. They wonder with us facing a real deficit of roughly $300 plus billion, what in the world is going on.

They don't know about possession, because they don't know how this contract works, and the truth of the matter is that they are as outdated as that 1872 mining law, and that needs to be updated, and we need to do these things just like everybody else does. Put them out on competitive bids, and I think we have a right to determine on the front end what we are willing to take, and if the bids don't reach that, then we will re-let them.

But we are losing, and I am convinced that we are losing millions of dollars on that, and in the case of the 1872 mining law, which Ulysses Grant signed, we are losing hundreds of millions of dollars a year, and so as soon as I can get Senator McClure back to Idaho, I am really going to push this bill. [Laughter.]

And I am serving notice now that we have held hearings on it this year, and every time I hold a hearing I find that the thing is even more egregious than I thought. Now, insofar as this $100 fee, the holding fee which you recommended, and which Senator McClure has some concern about, I have a concern about it, too, because I think it ought to be $1,000 instead of $100.

But you talk about Jack Anderson, and the concession contracts, what do you think the American people's reaction will be when he writes a story saying that under this 1872 law, you cannot only file a claim for 20 acres anywhere on public lands, and there are now 1,200,000 claims, covering 45 million acres, and that conceivably the United States could ultimately have to give up for $2.50 an acre, and that could be mined without a bond, and with all the rape and environmental pillage that could entail, and that the taxpayers would be expected to pick up, and without paying a dime of royalties.

And we have already sold off lands the size of the State of Connecticut for $2.50 an acre, and you have seen the GAO report, which Senator McClure takes exception to, but there are some references in there about people who buy this land for $2.50 an acre from you, and go out and sell it for thousands of dollars an acre.

It took me 8 years to change to a competitive bidding system of the oil and gas leases in this country. It may take 8 years to do this, and I may not be here that long, but I am sure as hell going to give it my best shot, because in my opinion the mining law of

1872 is a bigger scam than the lottery system was on oil and gas leases.

Now, your rationale for the $100 holding fee is a perfectly legitimate one. No. 1, to allow these people to pay an annual $100 fee is better than having them go out there and turn some dirt over, and pretend they are spending $100 a claim on it, and doing environmental damage.

And, second, it does make it eminently more traceable and easier to monitor from BLM's standpoint.

You know, Arkansas has the only diamond mine in America. We have a diamond mine park that is one of the most heavily visited parks in Arkansas. And there is a commercial organization who wants to mine those diamonds, and I established that park when I was Governor, and I have some materialistic interest in it, and frankly, I don't want it mined, but I have stayed out of it, but my point is this.

If that land—they are willing to pay the State of Arkansas a fortune to mine those diamonds commercially. If that were on Federal land, they could go out there and stake a claim on it, and they would not have to pay a nickel to the Federal Government. What do you say?

Secretary **Lujan**. Well, I agree with a lot of what you have stated. I think that $2.50 is not an acceptable thing to have.

Senator **Bumpers**. Well, don't you think that we ought to just stop that whole host of people going out and filing claims, and then later coming back and saying that I want a deed to this land for any price? Who are they to demand that we give them a deed to land at any price?

Secretary **Lujan**. We are trying to work out arrangements with those that do have pending claims, Mr. Chairman.

ABANDONED MINE SITES

Senator **Bumpers**. Do you have any idea, Mr. Secretary, what it is going to cost the taxpayers of this country to clean up abandoned mine sites?

Secretary **Lujan**. I don't know precisely, but it will be expensive.

Senator **Bumpers**. It is going to run into the billions, isn't it?

Secretary **Lujan**. Yes.

Senator **Bumpers**. And we still don't require bonds from these people.

Secretary **Lujan**. That is correct.

Senator **Bumpers**. You know, I just can't believe this. I can't believe that anybody could defend it.

Mr. **Itteilag**. Senator Bumpers, the inventory backlog update that we are doing now in OSM indicates that it is roughly 2.2 billion dollars' worth of work yet to be done under the Surface Mining Act for priority 1 and 2 AML problems.

Senator **Bumpers**. The staff is showing me a figure of $5.8 billion.

Mr. **Itteilag**. I think the inventory scrub now going on has reduced that.

Senator **Reid**. It is according to which study you follow.

Secretary **Lujan**. We are talking billions of dollars, yes.

Mr. **Jamison**. Mr. Secretary, could I say something about bonds here?

Secretary **Lujan**. Certainly.

BONDING POLICY AND MINING LAW

Mr. **Jamison**. Senator Bumpers, as we said at the hearing when I was up in front of you, sir, on the mining law, is that very shortly we will have a bonding policy that will require bonds in all mining activities, both in 5 acre and above, and below, and hopefully we will have that in place in the next couple of months.

And we are going to come up and share that with you and the staff, and on both sides of the Hill here, probably in the next several weeks.

Senator **Bumpers**. Cy, are you familiar with Ralph Regula's efforts on the House side to declare a moratorium on granting any deeds?

Mr. **Jamison**. On patents?

Senator **Bumpers**. Yes.

Mr. **Jamison**. Yes.

Senator **Bumpers**. Granting any patents?

Mr. **Jamison**. Yes.

Senator **Bumpers**. Have you all taken a position on that?

Mr. **Jamison**. No; we have not yet, but when we look at the numbers on that, you are only looking at a number of patents, actually, of somewhere between 40 and 50 a year, and many of those——

NUMBER OF MINING PATENTS

Senator **Bumpers**. How many patents did you grant in 1989, and how many have you granted so far this year?

Mr. **Jamison**. By golly, I just happen to have those numbers with me. [Laughter.]

Senator **Bumpers**. I guess I can hear your staff saying You had better—Senator Bumpers may be there and you had better take it with you. [Laughter.]

Mr. **Jamison**. In 1989, we granted 32 patents.

Senator **Bumpers**. On how many acres?

Mr. **Jamison**. I can't say that, because most of the patents involved more than one claim, and so I could not get that data together quickly enough. In 1988, we did 38 patents, in 1987, 93, in 1986, 52, and 1985 is the last year that I have, and that was 48 patents.

INSPECTION OF MINING CLAIMS

Senator **Bumpers**. Now, let me ask you this. When you granted those patents, did you go back a year later to see whether they were mining hard rock minerals on those lands or not?

Mr. **Jamison**. That is not our job.

Senator **Bumpers**. Whose job is that?

Mr. **Jamison**. If it goes into private ownership, then the State, whichever State it is in, they follow it under their mining reclamation laws. Most of those mining reclamation laws are more stringent than we at BLM have at the present time.

Senator BUMPERS. Now, I am not talking about what the reclamation laws of the States are. I am talking about whether they ever mined anything or not.

Mr. JAMISON. As long as they prove that they have found valuable deposits, then that is all that is required.

Senator BUMPERS. Once they get the patent to the land, the U.S. Government never checks to see whether it was ever mined or not, and they can sell it to their next door neighbor for $2,000 an acre if he is willing to pay it can't they?

Mr. JAMISON. That's true.

Senator BUMPERS. Thank you.

Chairman BYRD. Senator Cochran.

NATCHEZ NATIONAL PARK COMMISSION

Senator COCHRAN. We appreciate very much your support and particular assistance with the National Park Service, and the establishment of a new national park, in Natchez, MS, and we were glad to be able to welcome you there for the dedication.

Now, in connection with the Natchez Historical Park, the law requires the appointment of an advisory commission, which has the obligation of meeting on a regular basis, and semiannually, with the Secretary or his designee, to make suggestions about the management and operation of the park.

It is my information that under the law the Governor and the mayor of Natchez are required to submit suggested names for consideration for appointment, and that has been done, and now it is up to the Secretary under the law to make the appointment of those members of that commission.

I would like to urge you to have somebody look into that, and determine whether or not that can be done now. I am advised that it is time to make those appointments, and I would hope that you could advise us with what your intentions are in terms of making a decision about that.

Secretary LUJAN. We generally accept those recommendations, but I will look into that, and get back to you. The Natchez Historical Park?

Senator COCHRAN. Yes; the Natchez Historical Park Advisory Commission.

Secretary LUJAN. I will look into that.

Senator COCHRAN. The aquaculture interests in the Mississippi River Delta have a problem that the U.S. Fish and Wildlife Service are looking at in connection with the blue herons and cormorants that are protected by law and who are eating all the catfish. [Laughter.]

It is important for the farmers to be able to maintain their production of catfish for economic well-being. I understand that the U.S. Fish and Wildlife Service is now in the process of discussing the problem with the Department of Agriculture's Animal and Plant Health Inspection Service, and that they are trying to work out some new order which will prescribe the way you can go about dealing with this problem.

I would simply bring this to your attention and hope that you could encourage the U.S. Fish and Wildlife Service to continue these discussions, with the hope of working out some satisfactory solution of that problem.

Secretary **Lujan**. I have the Director of the Fish and Wildlife Service, Mr. Turner, here. Mr. Turner.

Mr. **Turner**. Senator, I appreciate your comments. The Fish and Wildlife Service is indeed trying to be a more positive partner with the aquaculture industry.

Senator **Cochran**. Thank you very much. Thank you, Mr. Secretary, and Mr. Chairman.

Chairman **Byrd**. I believe all our subcommittee members have now had a chance to ask questions. Senator Lautenberg is a member of the full committee, and he is not a member of the subcommittee, but he is welcome to ask questions at this point now before we begin another round of the subcommittee. So, we are very glad to have you present, and would appreciate if you would proceed to ask your questions.

OCS LEASING OFF THE NEW JERSEY COAST

Sen ator **Lautenberg**. Thank you very much Mr. Chairman, I am grateful to you for permitting me to join the subcommittee today, and I wanted to have a chance to discuss with the Secretary some of my concerns about the OCS ban that was recommended a couple of weeks ago. Mr. Secretary, I welcome the opportunity to see you here today.

You are aware that in 1988, then candidate George Bush, came to the seashore of New Jersey, a shore besieged by oilspills and other pollution. He stood there, and he called the pollution of our beaches a national tragedy, and obviously he was right, and he promised to protect our shores.

Yet, the administration's ban on offshore drilling protects just about every sensitive shoreline except New Jersey's. It covered tracts for California, Oregon, Washington, Florida, and all of New England, and for some reason the President doesn't think that New Jersey's sea coast deserves the same level of protection.

Well, I need to tell you that New Jersey's beaches are just as important, and our fishing and tourism industries are just as significant as those of States covered by the administration's ban. Our beaches and coastal waters are every bit as dear to us and as threatened as those waters in which the President banned oil and gas drilling, and we think they deserve equal treatment.

I would ask you, Mr. Secretary, that if you need 6 or 8 years to review all of the concerns about the environmental impacts in these other States, why is it that you have been able to find all the answers about the environmental impacts affecting the New Jersey coastline so quickly?

Secretary **Lujan**. Well, Senator, the person that has been working on those issues is here, Mr. Barry Williamson, and I asked him to join me today, because I felt that the whole OCS question is very, very important, and if someone needed to get into the specifics of it, then——

Senator **Lautenberg**. We had a chance yesterday, and I appreciated the visit, Mr. Williamson, but I have to tell you in fairness that the answer that I got was unsatisfactory, because we wound up in a discussion of contour resource potential, environmental sensitivity analysis, and all of that is very, very interesting. But I never heard how New Jersey is different from those States that get protection under the President's ban?

The fact is that it takes years according to statements made by the administration, by the President, by your Department, to do a final analysis, and what we find is that for New Jersey, the decisions have been made, and we would be moving now in New Jersey with lease activities without the same environmental studies if it wasn't for the fact that we are waiting for a decision to be made in North Carolina, where the Governor has resisted OCS drilling there.

And it seems to me that when it came to the New Jersey coast it was easy to make the decision, and we had all the information we needed, and yet these other places with much more resources, with much more likely economic returns, and where, in fact, the sea coast in some of those cases hasn't played as near a major role, in the economy of the shore, and with all of that, we have been able to deal with the New Jersey problem so quickly, and so expeditiously, that you are ready to go ahead, given a year wait, because we are waiting on the Governor of North Carolina to make up his mind.

STUDIES TO DETERMINE ENVIRONMENTAL IMPACTS

Secretary **Lujan**. Well, of course, you know, that we have the 5-year plan moving, and we didn't, however, put off all of those areas. We did say—the President did say that in certain areas we didn't have enough knowledge to proceed with additional sales, such as in Santa Barbara and in Santa Maria, where we had leases already out there.

You know, when you have leases, it causes a particular problem for us, where those leases have already been issued, about cancellations. We use faith in the future on who is going to do business with us in any production.

So, that is the first thing. The second thing is that if we move ahead and cancel leases, we have to return the money back, and it is a very, very expensive proposition. I can't tell you specifically what more we know about the waters off the coast of New Jersey, because I don't have the specifics about it.

But I have thought that perhaps Mr. Williamson would be able to discuss those with you, and I would hope that you all can work things out together, and I will be as helpful as I can in those areas.

REEVALUATION OF SALE 121 DECISION

Senator **Lautenberg**. I know, Mr. Secretary, that you have a deep, long-term interest in protecting our environment, and I know that was so when you were in the other body, and your statements have always confirmed that, but what we would like is that if we are going to be doing studying around the country, we would like New Jersey to get the same opportunity to have the evaluation done, and no conclusion before the year 2000, 10 years hence roughly, and say, OK, listen, let's hold off.

I mean, if we can hold off on the Georges Banks, and we can hold off on the Florida coastline, and we can hold off on the California coastline, and Washington, Oregon, and all those places, then let's hold off on the New Jersey coastline as well.

It does not appear that those deposits have excited the companies in any significant way, and the most optimistic estimates indicate the resources would supply our Nation's energy needs for 13 days if things work out. That does not sound like we ought to take a chance on spoiling an environment that has already been assaulted by every manner of contamination, as we have been.

And what I would like to do is have us put on the same foot. I am not asking for any preferential treatment for New Jersey. I want to be treated at least in the same way, as the other States protected by the ban. The decision looks so arbitrary, Mr. Secretary, honestly. Why suddenly is California, where we know there is an abundance of oil, where oil has been drilled for a long time, yet we are going to hold up and investigate these leases, while we have gone ahead and said, OK, New Jersey can move alone with its prelease activities, et cetera, and I am asking why it is that the decision was made so hastily, and why it is that we can't just put this on a backburner, just like we are doing with the other States.

Secretary LUJAN. Let me ask Mr. Williamson to respond to that.

STRIKING A BALANCE BETWEEN RESOURCE PROTECTION AND PRODUCTION

Senator LAUTENBERG. I would be happy to hear from him.

Mr. WILLIAMSON. As we talked yesterday, there were several factors that went into the President's decision. I have been around talking to many Members of Congress and many Senators over the last year about the OCS issue, and the status of the OCS issue. What we have heard is that they would like us to focus our efforts on moving forward in areas where the environmental assets can be managed. So what the administration has done is try to strike a balance.

The President requested in his first State of the Union Message that we convene a task force to look at three controversial OCS areas: northern and southern California, and southwest Florida. we also had a task force going in Washington and Oregon, which is a frontier area. We have been doing business off the coast of the North Atlantic for several years, so we have been on this issue for as long.

There are a lot of differences between those two coasts from a resource standpoint, and there are a lot of differences from an operations standpoint.

Senator LAUTENBERG. What are the differences, Mr. Williamson?

CALIFORNIA VERSUS NEW JERSEY

Mr. WILLIAMSON. The fundamental differences are, No. 1, that in California, OCS exploration and development occurs 5 to 7, to 8 miles off the coast, whereas we are 50 to 60 miles off the coast in the mid-Atlantic areas, and that is a fundamental difference from an oceanography standpoint, if you had an accident. You indicated that the President moved to protect the shores, what he actually did was that he moved to gain scientific information to make an appropriate decision. The damage that is going to the shores, I would submit, is not from OCS, but——

Senator **Lautenberg**. Let me strike shore, and say the area. I mean, I think we get so technical when we talk about the shore. If there is an oilspill, it damages marine life, whether it is marine animals, whether it is marine shrubs, shell fish beds, coral. It does not matter. We are saying to protect an environmentally sensitive area.

Mr. **Williamson**. Well, the position we want to get to is where we can be correct in making those decisions, and determining whether we can go forward. What we had done for the proposed Mobil well in the mid-Atlantic is to do an environmental analysis over and above what is called for in the OCS Lands Act, and over and above what is called for under NEPA, and have worked with North Carolina, and with the Governor, and with the Congress, to develop a special environmental report, because of the interest in that area.

And we think the process is very important, and I would encourage that the Senators adhere to that process in the appropriations process. We are attempting to work out the environmental concerns in that area, and we think that the current process will work through those issues. The environmental issues that have been raised are being addressed, and can be worked out through that process.

Senator **Lautenberg**. Well, Mr. Chairman, I would like all of these assessments, the environmental impact statements, et cetera, for all of the places, to be put on the table at the same time, so that we are not going ahead and taking the risk off the coast of New Jersey that we would not take off the coast of California, or the coast of Florida.

EXISTING LEASES VERSUS NEW LEASES

And, Mr. Secretary, I wanted to make mention of the fact that when you talked about canceling existing leases, it is very expensive, and very disruptive, and we are not asking for any cancellation of existing leases. We are saying don't do anything on new leases, and sale 121 is the one we are talking about, until we are satisfied that the need is there to drill, and the resource is there, and that the environmental protection guarantees can be made.

Again, if you just look at the facts, I would submit to you that we are taking a risk off the coast of New Jersey that we are not taking any place else, Mr. Chairman, and I would hope that we can make necessary decisions to prevent this from going ahead of anybody else.

I am not asking us to be dropped totally, and I am not asking for us to get any preferential treatment. I don't want the coast off of New Jersey to be discriminated against in any way.

Secretary **Lujan**. Well, I understand your concerns, and we will get back to you.

Senator **Lautenberg**. Thank you very much, Mr. Secretary. Mr. Chairman, thank you very much for letting me be here today.

Chairman **Byrd**. Senator McClure.

Senator **McClure**. Mr. Chairman, I have one additional statement, and I am sorry that Senator Bumpers isn't here, but I had to bite my tongue [laughter].

1872 MINING LAW MERITS

Using his time, I think he is entitled to use as many statements as he is entitled to make, but I don't want this hearing to close without at least a statement, or a couple of statements, partially in rebuttal. One is that you cannot equate hard rock mining with oil and gas.

It is a different industry, and there are different problems and different economics. There may be some who wish to simply say, well, if we did to northern gas what we are doing to hard rock minerals, and then simply plead their ignorance with the difference between the two industries.

Second, the reference, and this is an emotional reference, to a law that was passed in 1872, and signed by the President at that time, and the implication being that if it is that old, then it has to be bad. The Constitution of the United States is 200 years old, and it is still serving us pretty well, and I have not heard any calls for the repeal of the Constitution.

So, just being old doesn't necessarily mean that it is bad. As a matter of fact, we do preserve quite a number of things that are old because they are old, and worth preserving.

But, more importantly than that, the mining law of this country has been amended repeatedly since 1872. The only thing that really remains is the theory of the law, which perhaps some would suggest is outmoded, and that is the location patent system, such that anybody can go out on public lands and see whether or not they can find a mineral that has value, and if so, they are then entitled to exploit that mineral if they find it.

That was embedded in the 1872 law, and it has been preserved over the years since then by a Congress that has looked at that issue dozens, and dozens of times over the years, and has reaffirmed the validity of that principle.

It is still a good principle in my judgment, and with respect to the sale of the land for $2.50 an acre, and I know, Mr. Secretary, that you have expressed personal concerns about that, and it ignores the fact that before you get to that point you must have spent many, many, many thousands of dollars to justify the action taken by the Government in granting the patent.

That is not something that just happens automatically, and that you go out and file a claim, and then walk into the land office and say, well, now, I want my patent. It does not happen that way, but I would also say that starting—and while I was still a Member of the House of Representatives over 20 years ago, I advocated a system that would separate the theme of the service from the theme of the minerals, to reserve both the public's right and the governmental right in an appropriate balance, so that you don't run across these kinds of charges that, well, the minute you get the title to the land that you can do with it what you want.

Let's go back to the State of Arkansas, and find out how the people in Arkansas got title to their land, and whether they used it right or not, and we will take back everything that we don't like. That seems to me to be a fair competition, and there are some people in Arkansas, too, that have abused their land.

I suspect that you might even find some farmers down there that aren't doing the best kind of agricultural practices with respect to the preservation of their land, and they did not file a single bond. Not one.

BONDING REQUIREMENTS

And I would say, Mr. Jamison, that I am very much concerned about a bonding requirement, because that can also become an absolute bar to activity, because bonds are not easy to obtain, and I hope in the Government regulations we will not lose sight of the fact by splitting up a bond requirement, and simply say don't come, and we don't want you here any more.

Now, there are some people who don't want any mining, and mining provides jobs for people, and it provides economic wealth for this country. If they are successful, it provides tax revenues to the State and local governments, and to the Federal Government.

USE OF FEDERAL LANDS RESOURCES

So, it is not without a return to Government that mining is successful. Now, if you want to continue to weaken this country by requiring us to import more and more of basic goods that we require, then just lock up the public lands, and don't let anybody mine, and don't let anybody get any of the resources off those lands, and close down the timber industry throughout the West on BLM lands and Forest Service Lands, and we will have a beautiful pristine area.

And then we will have problems like our friend from Alaska mentioned, like the fires in Alaska. I might just indicate that in the Tahoe Basin, for example, you would not have fire problems that you have on the Forest Service lands if some of that timber had been harvested.

But you have a problem because timber gets old, and when it is under draught conditions it gets infested with disease and bugs, and it dies, and when it dies, it is a fire hazard, and then somebody says, oh, my goodness, why didn't we do something about those fires. We did, and we made this inevitable.

That is the truth of some of the public land management issues that we have, but, Mr. Chairman, this is not the time to debate them all, but I could not let the record go without making some statement that there is another side to the issue, and that which was presented by Senator Bumpers in his own inimitable style. [Laughter.]

Thank you, Mr. Chairman.

Chairman **Byrd**. Senator Hatfield.

Senator **Hatfield**. Mr. Chairman, I appreciate the opportunity to be here, and especially since I am not a formal member of this subcommittee. I would like to ask some questions if this is an appropriate time.

Chairman **Byrd**. We are happy to have you ask questions, Senator Hatfield. Senator Hatfield is the ranking member of the full committee, and although he is not a member of the subcommittee, he is welcome and the rest of us have already had the chance to ask questions, and we would ask that you proceed.

SPOTTED OWL LISTING AND EFFECT ON TIMBER PRODUCTION

Senator **Hatfield**. Thank you, Mr. Chairman, and Senator McClure, I appreciate the courtesies, and I would like to raise a subject, Mr. Secretary, at this point. [Laughter.]

Mr. Secretary, you and the Secretary of Agriculture were at a joint press conference not too long ago at which you announced the establishment, on the recommendation of the President, of a joint task force to study this matter relating to the spotted owl, the protection of the owl, and the listing of the owl under the Endangered Species Act.

And in that press conference you indicated that an interim proposal would tide over to the period of time necessary for the long term recovery plan to be developed under the Endangered Species Act, and you indicated at that time that by September 1 there would be a sort of a bridge policy for fiscal year 1991 and fiscal year 1992.

My question, of course, is what is the makeup of that task force? Tell me what you have done in terms of your meetings and how you expect to consult with the Members of Congress, and the progress.

Secretary **Lujan**. Well, as you know, for the BLM lands we had a plan on how to manage that forest during that period of time if we could, quote, protect the owl, and——

Senator **Hatfield**. And that has your approval, your stamp of approval?

Secretary **Lujan**. Yes, Senator; it does.

Senator **Hatfield**. Are you confident with the volume, the board feet recommended in the plan? We have as current plans 1.1 billion board feet, 950 million board feet in the so-called section 318 of the fiscal year 1990 appropriations act, and the Thomas report indicates about 500 million, while the Jamison figure is about 750 million.

Secretary **Lujan**. Yes, sir.

Senator **Hatfield**. And you are confident or comfortable with the Jamison plan of 750 million board feet?

Secretary **Lujan**. Yes, sir; I am confident with that.

Senator **Hatfield**. How about the Fish and Wildlife Service on that figure?

Secretary **Lujan**. Well, it has worked pretty well up until now as you know. BLM has conferred with the Fish and Wildlife Service on all the contracts that came up, and they worked out pretty good under the 318 provision.

Senator **Hatfield**. So, you are saying the Fish and Wildlife Service has signed off on this BLM proposal for fiscal year 1991?

Secretary **Lujan**. I don't know——

Mr. **Jamison**. Could I answer that question, Mr. Secretary?

Secretary **Lujan**. Yes; I don't know if they have to sign off on it. We do have to consult with—BLM has to consult with the Fish and Wildlife Service, and I anticipate in everything that I hear from both agencies that consultation will proceed very well. So, would you like to say something on that, Mr. Jamison?

Mr. **Jamison**. Senator Hatfield, Cy Jamison, BLM. I am very confident that we can accomplish through the Fish and Wildlife Service our goals for 1991 and 1992. We have been in contact on the local levels, and from the State directors, and their regional directors. I met with both of them just as recently as Monday. I have been in contact with Mr. Turner, and I think we have a fairly smooth system set up for them to consult on each one of our sales for those 2 years. I am confident of that.

Secretary **Lujan**. Mr. Turner, who is the head of the Fish and Wildlife Service, is here, also, likewise.

SECTION 318 IMPLICATIONS

Mr. **Turner**. Mr. Chairman, and Senator Hatfield, Mr. Jamison is correct. We have had a lot of cooperation and a lot of dialog on sales under section 318 of the general provision, and have already conferenced on uncut timber sales. We are not anticipating any serious problems as we consult again on these sales as they are resubmitted for formal consultation.

We just don't see any problems there. Of the remaining 318 sales yet to be sold we have not gone into those yet, but in preliminary discussions we certainly did not see any problems. Looking at the long-term program, it is not the Fish and Wildlife Service's responsibility to prejudge the decisions that the Director of the BLM has to make, and the strategies, and inventories, and the environment and biological impacts, but we are sure working well together on it.

Senator **Hatfield**. Mr. Turner, is it your understanding that the Thomas report, the science report, did not perceive that their work would impact on fiscal year 1990?

Mr. **Turner**. Mr. Chairman——

Senator **Hatfield**. The 318 sales.

Mr. **Turner**. That is a difficult decision. The Thomas report was sort of based on the court decision in your State, and in your region, based on the mandates from the organic management legislation and authorities. Of course that is with the BLM's jurisdiction. We are now required under the Endangered Species Act to look at the best science available—and the Fish and Wildlife Service has the Thomas report in addition to other sources, good scientists.

Senator **Hatfield**. You are familiar with Mr. Thomas' testimony in a hearing that I chaired as to the explicit statement that they did not include in their report fiscal year 1990 programs, and that I think is a pretty clear reference——

SPOTTED OWL TASK FORCE

Secretary **Lujan**. If I might proceed on here with that. You asked me about the Forest Service portion of it, we have had our initial meeting, and as you know, the Secretary of Agriculture chairs that, and I am a member of it, and I believe that the Chairman of the Council of Economic Advisors is a member of it, and EPA is a member of it, and the Office of Management and Budget is on it, and that is the membership.

We have put together a working group from each one of those agencies to come up with that plan. I don't anticipate a lot of trouble with it.

Senator **HATFIELD**. How many times have you met?

Secretary **LUJAN**. Excuse me?

Senator **HATFIELD**. How many times have you met?

Mr. **JAMISON**. Our staff has met—I think they are meeting today, but it has been several times. At the staff level, there have been a number of meetings, and the principals have met once.

Senator **HATFIELD**. What is your schedule for the future, in terms of a series of meetings, or is this going to be hammered out primarily at the staff level?

Secretary **LUJAN**. I would imagine—well, our plan is that from time to time we will meet with the staffs and see what progress they are making, but the plans really have to—because of the basic science involved, that the staff will sit down and hammer it out. I know that we will either have to approve it, or turn it down.

CONSULTATION WITH CONGRESS AND GOVERNORS

Senator **HATFIELD**. Mr. Secretary, let me back up for a minute. When the President made his announcement, or when the White House made it, there were two additional groups to be consulted, namely the Governors, and Members of Congress. Now, what are the plans for that consultation?

Secretary **LUJAN**. Well, that is an instruction, and I don't know specifically. Don Knowles is——

Senator **HATFIELD**. We know Don Knowles. [Laughter.]

Secretary **LUJAN**. That is why he is working on this issue. [Laughter.]

Because he is more sensitive to it.

Mr. **KNOWLES**. They are meeting right now to, at this very moment as a matter of fact, to develop a schedule, both of consultations with the Governors, and with Congress, and some field hearings. They are not sure exactly where and when. The charter for the group, and the operating procedures for the group are still being developed. It is conceivable that the task force would be divided into subgroups, or working groups, designed specifically to their skills or expertise.

I would assume that by the first of the week we should have an overall status report and schedule, and that the staff could present those to the principals of the task force by the first of next week.

Senator **HATFIELD**. May I take this opportunity to say to you that the Governor of Oregon has probably—and I am sure the Governor of Washington as well—has strong interest in this matter. Having worked in the forest planning process with them and their staffs, I know that he has reiterated that he or his staff is available on-call, here or in Oregon, at any time that they can be helpful.

I would urge you to consult with them, because they do have in both States competent staffs, and my staff certainly, also.

Secretary **LUJAN**. Well, we are certainly aware of that, and we did not intend to proceed at all without consulting with Congress and the Governors, particularly with the Congress, because it is my feeling that whatever we do we have to bring it up here, and you folks are going to have to put your blessings on it.

COMPONENTS OF ENDANGERED SPECIES DECISIONS

Senator HATFIELD. Mr. Secretary, you mentioned the Congress, and I want to make it very clear that we have not in any way attempted to amend the Endangered Species Act. I am an original supporter of the Endangered Species Act.

Nevertheless, I would like to remind you, although I am sure that I need not do so, that in the endangered species procedure there is not only the science, but the economic and social impacts, the community impact, and that has to be a mix in the ultimate recovery program.

I find nothing incompatible with those groups, even though the advocacy groups oftentimes will polarize, saying you have to choose between economics and preservation of the endangered species, and I don't accept that. I believe that people with expertise, professionalism, and good will, can blend those values affecting the environment and the economics in a compatible fashion.

Now, at the same time, there is an awful lot of emotional polarization and politicalization that has been picked up. Any time there is national news on television about the so-called western problem, they always show a clear cut, and that is all they ever show. And then they talk about the ancient forest problems, and the 1,000-year-old Douglas fir. Who ever saw a 1,000-year-old Douglas fir?

TIMBER EXPORTS BAN

But the misrepresentations and simplistic approaches that are being authored by most of them are mind-boggling. Mr. Chairman, we have exported from region six, Oregon and Washington, about 3.7 million board feet, and we have been banning exports from Federal lands every year as all of you know, because we have included on this bill, an appropriation bill, a ban on the export on timber from Federal lands in the lower 48 west of the Mississippi.

Mr. Morris did that as my senior colleague when I first came to the Senate on the foreign relations authorization bill, which had to pass every year. And so we came then over here to the Appropriations Committee.

But when you analyze the loopholes that are being closed now due to the action of the Senate on Federal lands, and the bans by the States, out of the 3.7 billion total exported, 2.9 comes from private lands. We have exported about 8 billion board feet from Oregon public lands, and have with the State of Washington, banned 450 million board feet from their State.

So, the point is that supposedly somehow banning from private lands will offset the loss. Well, first of all, politics on that are not real. They are not real from the standpoint of what Mr. Carter did in banning the export of grain to the Soviet Union.

You could not get a Midwestern Senator from a Midwestern State, or a Southern Senator, to vote for banning from a private land resources because of what they have experienced in wheat.

Now, the point is that even if we ban exports from private lands the major part of that private ownership is in your large companies that have no obligation to make those raw materials—logs—available to small- and medium-sized mills—their competition—even if you banned the export.

Consequently, I see these large mills from here to tomorrow, going out and bidding on a public timber sale against a small operator just to run them out of business. They are cannibalistic people in that industry, and so there is no obligation to make their private logs available, even if they could sell them in the open-market or foreign market, to some of those 70 communities in Oregon that have a one or two mill economy—small or medium operators who are totally dependent upon public timber.

So, I hope that this task force will lay to rest some of these inaccuraces and public relations proposals that make it easy for candidates for public office to use an easy cliche by saying here is the solution, and scream and wave their hands at an opponent when this is really a very complex issue if anybody gives any attention to it at all.

And so I hope that this task force does not only establish the ASQ and the other attendant parts of implementing a timber program, such as timber sale preparation, road construction, et cetera, et cetera. All of this counts, but we need at the same time to address some of these simplistic things that are in the public arena that do not resolve the issues but merely provide for political fire.

I am hopeful that this task force will put a priority on this, because September 1 is not too far away when you don't have the month of August here in the Capitol, anticipating a month of August recess and the fact that this will have to be legislated in all probability.

And you cannot assume that this is always going to be bailed out by the Appropriations Committee. This is not the place to do it basically, and it has only been done here because the authorizing committees and other committees have not taken any actions to recover or to set policies. Thank you, Mr. Chairman.

ENDANGERED SPECIES ACT REVIEW

Senator McCLURE. If you would yield for just a couple of comments, a question and a comment. If I understand it correctly, the task force has been set up and it was set up by administrative action, and it is not the review provided for by the Endangered Species Act?

Secretary LUJAN. That is true.

Senator McCLURE. Now, that is not a substitute for that review necessarily, but do you know whether there are plans for the review provided for in the Endangered Species Act?

Secretary LUJAN. Well, there has to be a finding of jeopardy by the Fish and Wildlife Service for us to call in the Endangered Species Committee, and we will see how that goes.

Senator McCLURE. And, second, I want to make a comment and commend my colleague from Oregon for having pointed out what is so often missed. The listing of a species under the Endangered Species Act is a scientific review by biologists, and their recommendation is based solely upon the science as they see it.

And with all due respect or appropriate criticism of the Thomas report, that is true biology. What happens after that recommendation and/or the listing then gets into both habitat designation and recovery plans, and that process is much broader than just the kind of review that is given as a status of the species, and that is what you are engaged in doing right now, and that is comparing what kind of administration of public lands is necessary to meet the requirements of the Endangered Species Act in view of the listing which was done on additional criteria; is that correct?

Secretary LUJAN. You are exactly correct. During the listing process, no one, including myself, interferes with the Fish and Wildlife Service. However, once that listing occurs, then you are perfectly free to bring in the economics, and the social and economic factors, and that is what we are hoping to do.

PRESENCE OF SPOTTED OWLS

Senator McCLURE. Recognizing that is true, and that this is not directed at the Idaho region, and I am not as involved in the spotted owl decision as I might otherwise have been on some other endangered species activity, because I have great confidence in the Senator from Oregon, and know that he is going to do all that I would do, and more, and I don't have to concern myself with it, there are two aspects of the biological review that bother me.

One is that I don't really know how much we have looked at the presence of the owl in old growth forests other than those that are in question, such as national parks, and national wild and scenic river systems, and the type of old growth forests like that, and I am not at all satisfied that there was nearly as careful a scrutiny of those areas as there was of those areas where timber harvests were proposed.

The second thing that I must also mention is do they look at the other habitat where the owl might live, other than the assumption that was made, that they did so only in old growth. Now, I have fragmentary information that I have never computed, but a friend of mine who was a forester in the State of Oregon over many, many years of his entire career, told me some 2 years ago that he and his family had seen spotted owls nesting miles and miles away from the old growth.

And perhaps my friend is entirely wrong, but it is a valid question. Third, there are other means by which you can propagate species, and maintain the species, if what you are concerned about is the species. Now, if what you are concerned about is the old growth, then that is a different question, and there is no secret that the spotted owl was first obtained as a surrogate by those who wished to prohibit any harvest of old growth timber, and that is on the record.

Some people want to expunge that part of history, but that much is on the record. I think we have not necessarily looked at the spotted owl as a species under the Endangered Species Act with nearly so much concern about the species as has been expressed about the preservation of old growth, and——

Senator **Hatfield**. And I would like to add additionally, Mr. Chairman, if you would just grant me a minute.

Chairman **Byrd**. Yes, certainly.

THOMAS REPORT CONSIDERATIONS

Senator **Hatfield**. I would just like to expand a little bit on Senator McClure's point. First of all, Mr. Secretary, let's bear in mind that the forest inventory considered under the Thomas committee report did not address the inventory on wilderness areas and these other classifications, such as scenic and wild rivers.

They established the fact that the best habitat was old growth. We, in Oregon, under legislation that I have authored from time to time, both in wilderness and scenic and wild rivers and other withdrawals, have now, according to Forest Service estimates, locked up 40 percent of our forests with administrative and legislative withdrawals or designations.

Yet—and remember that the Thomas report addressed both the habitat and the owl, too—two things: If the inventory did not include 40 percent of old growth, then to me there is that obvious flexibility in developing a recovery program other than being limited to those habitat conservation areas that were drafted on that concrete board map.

Second, bear in mind that the Thomas report doesn't say anything. They found many owls in the second group, not where they had originally thought, but in the second group. And they had habitat recruitment areas, believing that those can be preserved on second growth that ultimately become older in the evolution of the forests.

So, consequently, we have more trees today, for instance, in Oregon, than we had in the 1920's. True, the management of these forests is different, and the reforestation and so forth. So, when you think of the fact that we have over 700,000 acres of old growth today in our withdrawals—we have a prime candidate area there for protection. And Mr. Thomas, in his testimony, indicated flexibility in his report.

Secretary **Lujan**. Well, we are concerned about it, and we will come up with—I hope that we can come up with a good plan, that takes all of those things into consideration. We will take these other factors into consideration when coming up with a good plan.

Senator **Hatfield**. I would like to submit for the record these additional questions.

Chairman **Byrd**. OK.

[A brief recess was taken.]

[Discussion off the record.]

Chairman **Byrd**. Senator Domenici wanted to ask some questions, and he has indicated that he will submit his questions for the record.

ADDITIONAL COMMITTEE QUESTIONS

And we thank you for waiting, and thank you for your testimony, and we will submit some additional questions, and we will visit with you also about the Office of Surface Mining.

Secretary **Lujan**. Yes, sir.

Chairman BYRD. And see if we can't get you to make a couple of statements while we move forward, and not be dragging your feet. [Laughter.]

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Spotted Owl

Mr. Secretary, on June 22, the Fish and Wildlife Service announced its decision to list the Northern Spotted Owl as a threatened species. Several days later, on June 26, the Administration announced its proposals for proceeding to address the requirements of the listing decision and the Endangered Species Act (ESA) while attempting to provide some stability with respect to the supply of timber harvested in the Pacific Northwest and the protection of timber jobs.

The Administration has proposed a five-point plan that, while noticeably lacking in detail, purports to protect the owl and timber jobs in the region. The plan requires further efforts from the Administration and seeks Congressional assistance to implement certain aspects.

Question: Mr. Secretary, what are the components of the timber program which the Bureau of Land Management intends to conduct in FY 1991?

Answer: In order to offer approximately 750 million board feet (MMBF) of timber for sale in 1991, all of the integrated steps of the major components of the timber program will be carried out. These major components consist of timber sale planning, timber sale preparation, timber sale contract administration and timber management plan monitoring In addition the following reforestation and forest development work tasks will be completed:

147,000 acres of reforestation surveys 21,200 acres of site preparation 37,500 acres of plantation maintenance 35,400 acres of reforestation 15,930 acres of precommercial thinning 16,525 acres of forest fertilization.

Question: What are your current estimates of timber volume reduction and job losses as a consequence of the Jamison plan versus the recommendations of the Interagency Scientific Committee?

Answer: The Jamison Plan preserves most management options recommended by the Interagency Scientific Committee (ISC) report and proposes an annual timber sale offering of approximately 750 MMBF each year over the next two years, until BLM's resource management plans currently underway are completed. This is a reduction of 200 MMBF from the average annual sale volume, which was required by Section 318 of the 1990 Appropriations Act, of 950 MMBF (1,900 MMBF aggregate volume divided by 2 years) and proposed in the FY 1991 President's Budget. Assuming these reduced timber volumes would have otherwise been scheduled for harvest and processing over the next 3 to 4 years, the estimated volume loss to the employment sector would be about 50 MMBF in FY 1991 and 150 MMBF in FY 1992. At 10 direct and indirect jobs per MMBF, it would a loss of 500 jobs in 1991 and 1,500 in 1992 (average of 1000 per year).

The estimated impact for full implementation of the ISC report would be a reduction in annual timber sale volume, from the Section 318 level, to about 500 MMBF. Direct and indirect job losses (compared to 950 MMBF) associated with that volume level would annually average some 2250 jobs in 1991 and 1992 but would average some 4,500 jobs by 1993 to 1994. The earlier estimate of some 7,000 direct and indirect jobs was based on a long-term comparison of the ISC recommend levels with BLM's current "allowable cut" (allowable sale quantity) of 1,176 MMBF.

Question: Are changes necessary to the FY 1991 BLM budget request pending before the Subcommittee as a consequence of the Jamison Plan?

Answer: The listing decision and the Jamison Plan have made implementation of BLM's proposed FY 1991 timber sale program more complicated. Substantially more work than was envisioned earlier will be required due to shifts in timber sale locations, requiring replication of much timber sale pre-work, additional work for consultation with the FWS, increased monitoring, increased studies needed, and research regarding the spotted owl and silvicultural techniques, all at additional expenses. The BLM is currently evaluating these additional workloads and redefining the program funding requirements.

Mr. Secretary, I note that the Administration has chosen to follow two different paths to address the protection of the spotted owl on BLM and Forest Service lands. The "Jamison Plan" has been formulated for actions affecting BLM lands, while an interagency task force, convened at the Cabinet level, will be working to present the Congress with a management and protection plan for Forest Service lands by September 1st.

Question: What justification do you offer for addressing this issue differently within the Administration?

Answer: BLM management in western Oregon is guided by substantially different statutes than is Forest Service management. In addition, the Forest Service has the underpinning of recently completed or nearly complete new land management plans, while BLM's new land management plans will not be completed for over two years. Overall, our goal is the same, but the route to achieving it may vary due to some of the inherent differences between the BLM and the FS programs.

Question: Does one path offer greater protection for the owl versus the other? Does one offer greater protection for workers associated with the timber industry?

Answer: The objectives of the Administration are to provide protection for the spotted owl, maintain a reasonable flow of timber supply, and to minimize the adverse impacts to the economy. The Administration, working through the Task Force, will develop a consistent approach to meeting these objectives.

Question: How do you propose to comply with the Endangered Species Act if two different recommendations result from these efforts?

Answer: We intend to comply fully with the Endangered Species Act. The Task Force's initial focus is the FS plan. It will have the benefit of the Jamison Plan, the advice of members of Congress and the Public in putting together a workable and consistent approach.

One aspect of the Administration's recommendations would involve legislation to implement the Jamison Plan and insulate it from judicial challenge.

Question: Mr. Secretary, on what basis does the Administration believe the Congress will be willing to protect the timber program from judicial challenge and injunctive relief?

Answer: No specific proposal for legislative relief has been developed. Our intent would be to have protection against non-sale specific lawsuits, similar to that provided by Section 318 of the FY 1990 Interior Appropriations Act.

Question: What happens to the processes established by the Endangered Species Act if judicial review is waived?

Answer: We fully intend to comply with the Endangered Species Act (ESA). We do not envision that any waiver of non-sale specific judicial review would affect the process established by the Endangered Species Act.

Question: What scientific justification do you offer as a basis for deviating from the recommendations of the Interagency Scientific Committee?

Answer: We do not plan to implement the "50-11-40" recommendation of the ISC report fully because we believe it is not appropriate for lands in the checkerboard pattern of the O&C lands that BLM administers. The additional protection that BLM intends to provide by not allowing harvesting within the Spotted Owl Habitat Areas (SOHAs), that were jointly located with the Oregon Department of Fish and Wildlife (ODFW), will maintain a high degree of the intended "connectivity" requirement that is the basic purpose of the "50-11-40" recommendation.

BLM also proposes that additional research should be conducted to determine alternative methods to achieve the required protection that is necessary for spotted owl habitat.

Mr. Secretary, turning to the role of the Fish and Wildlife Service in the recovery of the spotted owl and prospects for its future, I would like to ask about the role of the Interagency Scientific Committee's report in the development of a recovery plan.

Question: **What assumptions does the ISC report include about survival of the owl if the ISC recommendations are adopted?**

Answer: The report recommends a strategy that, if fully implemented on Federal lands, is likely to provide for a well-distributed viable population of northern spotted owls throughout the present range of the subspecies. The report does not assume that the strategy will be applied on other than Federal lands, although it does recommend the strategy's principles to State and private land managers. It should be recognized that the strategy is acknowledged by the scientific committee to incorporate an element of risk to the owl that the committee was willing to accept in order not to render the plan incapable of being implemented.

Question: Would the ISC strategy, in its present form, serve as a likely basis for a recovery plan for the northern spotted owl?

Answer: The Thomas report represents the most current thinking about managing spotted owls and was developed by the most knowledgeable experts on the future management and recovery of the owl as well as having application to the management of other species. The Service will consider the applicability of the strategy in the report as the basis for a recovery plan under the Act and will determine whether implementation of the strategy would be likely to result in full recovery.

Question: What are the effects on the probability of survival if the habitat conservation areas are located farther apart, and are different in size?

Answer: Any alteration that would reduce the size or extend the spacing of habitat conservation areas recommended in the ISC report would be likely to reduce the probability of successful maintenance of the owl and increase the risk to its long-term viability. There is no simple linear relationship that can be applied, however, to these changes. Any alternative configuration would have to be subjected to specific evaluation to determine its likely efficacy in conserving the owl. The ISC strategy recommended a mechanism that would provide the opportunity to consider changes through review by an interagency group of scientists charged with oversight of the implementation of the strategy.

Question: How would harvesting over different periods of time affect the probability for survival?

Answer: It is not clear what this question is intended to suggest. If the suggestion is that rotation lengths (length of time between timber harvesting) be increased within habitat conservation areas as an alternative to deferring timber management activities entirely, the Service understands that the Committee thoroughly considered different strategies before reaching its final recommendations for the management of the owl. Included in that review was consideration of the ability of forests under longer rotations to support a viable population of the owl. It was the conclusion of the Committee that this was not a viable approach given the current state of the owl's habitat nor the expected need to continue to produce timber at an acceptable level.

Question: What are the risks associated with these various alterations to the ISC recommendations?

Answer: Any alternative strategy would have to be individually evaluated by qualified scientists to determine the probable increment of risk to survival of the owl it represented. It is not possible to derive increased risk by some formula that would yield specified increments of risk for specified reductions in size of habitat conservation areas, increase in distances between areas, or changes in other variables treated in the strategy. The Committee did conclude that any alterations to a proposal that already assumed a continuing decline in the population of the northern spotted owl would greatly increase the risk to its long-term viability. However, the Committee did recommend that an oversight group be established to review the implementation of its strategy and to consider questions of this nature.

Mr. Secretary, in addition to the Jamison Plan, one of the five points proposed by the Administration in response to the listing of the spotted owl as a threatened species is a ban on the export of raw logs from state lands in the Pacific Northwest.

Question: Has the Administration obtained a legal opinion which determines that such a ban is clearly constitutional?

Answer: A formal legal opinion on the constitutionality of a proposed export ban on logs from state lands has not been obtained.

Question: Did the economic analysis of the recommendations of the Interagency Scientific Committee include an assessment of the impacts of imposing a log export ban?

Answer: The "Economic Effects of Implementing a Conservation Strategy for the Northern Spotted Owl" did include an assumption of a total ban on log exports from all public and private land in its "Logx2 Scenario" in the analysis of the economic impacts of the ISC Report. A specific analysis dealing with just a ban from state lands was not included.

Question: What estimates can you provide the Committee regarding the additional timber harvest volume and jobs that might be available if such a ban were implemented?

Answer: It is estimated that an average of approximately 100 MMBF per year in exported from state lands in Oregon. Using the assumption of 6 total jobs per MMBF (4 jobs/MMBF are assumed to be associated with woods work which is not "lost" for exported logs), it can therefore be assumed that an additional 600 direct and indirect jobs could be made available due to the proposed ban. Information is not available on export volumes from California and Washington.

Question: What is the long-term impact of a log export ban? Do the job and timber harvest savings extend into the outyears, or would an accelerated harvest occur for just a short period of time?

Answer: The proposed export ban in the three affected states has not been fully analyzed to determine the specific long term affects.

Question: What other measures is the Department considering to enhance job opportunities in the Pacific

Northwest to counter any losses resulting from the spotted owl listing decision?

Answer: We are working with the Task Force and looking at a variety of opportunities in the context of the "big picture". At this time, we do not have any specific proposals developed.

Firefighting Costs

Mr. Secretary, each year about this time, we read frequent reports about the potential severity of the forthcoming fire season. This year has been no exception. The West is experiencing yet another drought year--the fourth in a row. In 1987, severe fires ravaged Northern California and Oregon; in 1988, we witnessed the devastation at Yellowstone; in 1989, fires raged through much of Idaho.

Year after year, the Federal government swings into action during fire season. Efforts are coordinated through the Boise Interagency Fire Center. In recent years, the Department has had to make extensive use of the emergency transfer authorities conferred in Sections 101 and 102 of the Interior Appropriation Bill. Those transfers cause considerable worry here in Congress, not because we are unconcerned about the need to fight fires, but rather, because of the disruption caused to the programs from which funds are borrowed--particularly land acquisition and construction accounts. Traditionally, these are areas where Congress has made significant funding changes to the President's Budget. The Administration's refusal to request funding to repay the lending accounts truly amounts to a *de facto line-item veto*. As Chairman of the Appropriations Committee, that is a situation I will not accept. In effect, Members have had to seek funding for their projects twice, once in the regular appropriation bill, and a second time in the form of a supplemental or "reimbursement" appropriation.

Mr. Lujan, last year, the Administration attempted to deal realistically with the problem of firefighting, and the enormity of the associated costs. Instead of relying solely on a "payback" method of funding fire costs, the budget proposed forward-funding the firefighting account. Congress disagreed with the financing scheme proposed, opting instead to appropriate funding to cover, as fully as possible, the anticipated fire expenses for FY 1990. Additional resources were added for FY 1990 firefighting expenses in the FY 1990 supplemental.

Question: What is your current projection for the FY 1990 fire year? Are your current resources adequate to address anticipated expenses?

Answer: This fire year continues to have the potential to be one of the most severe, depending on weather conditions. The normal progression of the fire season (beginning in the southeast, followed by the southwest, then Alaska, then migrating northward from the southwest states) is occurring. With the exception of the southeast (where a wet spring dampened high fuel loads from Hurricane Hugo), fire occurrence, acres burned, severity of burning, and weather conditions have significantly exceeded normal conditions. Without a major change from forecast weather, the remaining fire season has very high potential for remaining severe in the western U.S. Recent hot and dry weather in the southeast may also lead to increased fire activity there.

The level of firefighting costs depends on the total fire season, including that in the National Forests as well Department of the Interior lands. Under our interagency fire agreements, resources are shared among the agencies on a non-reimbursable basis. Typically, the Bureau of Land Management (BLM) and the Bureau of Indian Affairs (BIA) bear a high share of the interagency costs. The BLM contracts for aircraft, communications, and other resources that are in demand for large fires. The BIA often supplies large numbers of Native American fire crews.

Through August 31, 1990, $73.3 million has been obligated for Fire Management and Presuppression and $99.7 has been obligated for Emergency Operations. End-of-year obligations for Fire Management and Presuppression will depend somewhat on the severity of the fire season. If there are a lot of large fires, a significant amount of personnel time and other costs normally assigned to Fire Management and Presuppression (such as salaries and stand-by aircraft contracts) will be charged to suppressing those fires. In the absence of fires, those costs continue to be charged to Fire Management and Presuppression. We estimate that between $80.0 and $90.0 million will be spent on Fire Management and Presuppression by the end of the fiscal year. Given current conditions, we estimate that around $125 million will be spent on Emergency Operations by the end of the fiscal year, for a total FY 1990 firefighting cost of just over $200 million. We believe that the resources available in the 1990 Department of the Interior Appropriations Act and the 1990 Supplemental Appropriations Act are sufficient to cover our 1990 costs.

Question: What is the average of Department of the Interior fire expenses for fiscal years 1987 through 1990?

Answer: We have calculated the averages for management/presuppression and for suppression and for the actual period 1987 through 1989 as well as for 1987 through the estimated amount for 1990. The results appear in the following table.

($ in thousands)

	Average 1987-1989	Average 1987-1990
Fire Management & Presuppression:	62,002	71,232
Emergency Operations:	134,798	133,297
Total, Firefighting:	196,800	204,529

[NOTE: Prior to 1990, each bureau had a different budget structure; this table is based on best estimates by each bureau on how their 1987 through 1989 obligations would be distributed by the current firefighting budget structure.]

Question: How does that average compare with the FY 1991 firefighting request?

Answer: The firefighting request for 1991 is $165.6 million. In addition, we expect that there will be some carry-over into 1991 as a result of the additional appropriations for firefighting in the 1990 Supplemental Appropriations Act. The following table shows our current estimates for 1990 and 1991 resources and estimated expenses:

($ thousands)

	Total 1990 Approp.*	Est. 1990 Oblig.	Est. Carry-Over	1991 Request	Total Avail. 1991	1987-1990 Avg.
Fire Management & Presuppression:	98.921	90.000	8,921	99,350	108,271	71,232
Emergency Operations:	166,521	125,000	41,521	66,235	107,756	133,297
Total, Firefighting:	265,442	215,000	50,442	165,585	216,027	204,529

*NOTE: Does not include amounts appropriated to repay 1989 emergency transfers

It appears that the amounts appropriated for 1990 and requested for 1991 will be sufficient for total firefighting programs in 1990 and 1991. There are several factors that could affect the sufficiency of funds. As noted above, precipitation, fuel moisture, fuel loads, and related environmental factors play a large role in actual suppression costs. The expanded presuppression and program management capabilities beginning in 1990, including better fire management planning and programs to reduce fuel loads through prescribed fire and other means, are expected to help minimize suppression costs over time. However, in any one year, environmental conditions may overwhelm any savings due to better presuppression programs.

Certain presuppression activities, particularly management-ignited prescribed fire, also depend on weather conditions. Poor (dry, windy) conditions one year may force postponement of such work into the next year, causing some year-to-year variation in presuppression expenses.

Recent experience has indicated that aircraft and other necessary costs are increasing. In particular, rising costs of fuel due to supply uncertainties will continue to drive up aircraft costs. If such increases continue, both presuppression and suppression costs will also increase since aircraft stand-by contracts and other similar expenses are charged to presuppression when specific fires are not being fought.

Finally, 1990 is the first year that the four bureaus in the Department have been operating under the new budget structure and enhanced program management and presuppression programs. As a result of the experience of 1990 there are likely to be adjustments and refinements necessary to properly implement the programs in each bureau.

Mr. Lujan, in FY 1991 the Subcommittee may be forced to absorb all of the fire costs out of its discretionary funding allocation.

Question: If we continue to provide the emergency transfer authority of prior years, what is to prevent the Administration from using that authority to exercise a *de facto line-item veto* as it has done in past years?

Answer: Although we do not anticipate a need to use the emergency transfer authority in 1990 for firefighting costs, that authority remains an important tool for the Department when faced with unexpected emergency situations that cannot be anticipated during budget development and enactment. In recent years we have used that authority to respond to floods, earthquakes, volcanoes, and hurricanes, in addition to wildland fires. The authority in section 101 has also been critical in making funds available for reconstruction of important facilities damaged by fire, floods, and storms. Without this authority years could pass before funds could be requested and appropriated to reconstruct these facilities.

In the past, we could expect to transfer tens of millions of dollars each year for firefighting programs. With the funding of firefighting programs through appropriated funds beginning in 1990, the Congress has greatly reduced the need for emergency transfers. I expect that in 1990 and in the future my use of the emergency authority will be limited. I believe that such authority should be used judiciously, only in cases of true emergency, and when sufficient funds are not readily available without making an emergency transfer. If I should find it necessary to exercise my emergency authority, I will continue to follow the provisions of the law and make requests for supplemental appropriations.

My further suggestion is that, if there is any provision for supplemental appropriations as a result of this year's budget summit talks, paying back firefighting be included as a "dire emergency" or whatever other standard must be observed. Moreover, I suggest that you and I and Director Darman meet later this year to discuss this matter. I understand your point, and I'm sure we can work something out that's acceptable to all of us.

It will be much harder for Congress to restore funding that was borrowed from Members' projects when the restoration funds will be in the form of discretionary appropriations. It was easier when reimbursements came from mandatory funds and were not subject to a Budget Act point of order.

America the Beautiful

Secretary Lujan, your fiscal year 1991 budget request includes a total of $366,300,000 for a new appropriation account entitled "America the Beautiful". This program has been described as a new initiative; but, in fact, many of the activities included within this new appropriation are actually a continuation of programs which Congress has funded for years. By your Department's own account, $297,300,000, or 81 percent, of the new America the Beautiful appropriation was included within the FY 1990 Interior Bill.

Question: In view of this fact, can you explain why the Administration has touted the "America the Beautiful" program as a major new initiative?

Answer: The purpose of putting these programs together is to highlight America the Beautiful as a special Presidential initiative and to give an overall Departmental priority for these programs, such as land acquisition and wetlands. A new commitment by the Administration is evident in the funding levels. The America the Beautiful program for the Department is $69 million more than the Congress appropriated for those programs in FY1990, nearly a 25 percent increase, and $120 million more than was requested in the FY1990 President's Budget.

Question: Wouldn't you agree that, despite the previous Administration's very low budget requests for some of these very same "America the Beautiful" components (such as land acquisition), the Congress has been very supportive of these programs over the years?

Answer: Yes, we recognize that Congress has in the past appropriated more for some of these activities than was requested. The budgets previously submitted to the Congress have responded to the need for fiscal restraint and focused on other Governmentwide priorities. This budget for 1991 has an increased focus on the environment, demonstrating that although the overall dollars may go down to meet the Gramm-Rudman target, the budget goes up for programs to buy lands, protect resources, and enhance recreation in the America the Beautiful program. Thus, in partnership with the Congress we would like to go forward with America the Beautiful as well as Legacy '99.

Maintenance Funding

Maintenance of facilities continues to be a priority item for federal agencies. Mr. Secretary, an element of your Legacy 99 initiative is to improve the maintenance funding levels for four Interior Bureaus to reduce the accumulation of backlogs for repair projects. You are proposing a $41,400,000 increase, or 11 percent, above the FY 1990 appropriated level of $372,900,000.

You have stressed the importance of repairing and rehabilitating existing departmental facilities in the fiscal year 1991 budget request.

Question: Would you describe some of the maintenance problems that your Department faces in the National Park System, in the National Wildlife Refuge System, for the Bureau of Land Management, on the Indian reservations, and elsewhere?

Answer: Maintenance of facilities includes both operational maintenance programs, such as cyclic maintenance, funded in the operations accounts of the bureaus, as well as major rehabilitation projects funded in the construction accounts of the bureaus. A major maintenance problem faced by each of the bureaus is the sheer volume of the backlog of rehabilitation projects in the construction program. These total more than $2 billion without counting the Bureau of Indian Affairs. Current backlog estimates for rehabilitation projects are $1.7 billion for the National Park Service, $146 million for the Bureau of Land Management, and about $200 million for the Fish and Wildlife Service. This backlog is what is being addressed in my Legacy '99 program.

Our highest priority for these rehabilitation projects are those that address health and safety concerns. Some examples, are asbestos abatement at the Patuxent Wildlife Research Center, sewage system repair at Lacassine NWR in Louisiana, sewage lagoon replacement at Lake Mead NRA in Nevada, and water treatment upgrade at Yellowstone NP in Wyoming. For the Bureau of Indian Affairs we are examining the potential backlog of rehabilitation projects funded under the Facilities Improvement and Repair program to determine the sufficiency of funding levels for future budgets.

In addition to the construction rehabilitation backlog, the maintenance programs funded under the operating accounts for these three bureaus are also being addressed in the Legacy '99 program. These programs include both operational maintenance, cyclic maintenance, and repair and rehabilitation programs. Operational maintenance requirements grow as new refuges and parks are added to the current systems. Cyclic maintenance programs, which include painting, reroofing, and other types of preventive work done on a cyclic basis, should be at a level to prevent major rehabilitation projects later on. There are also backlogs of smaller repair and rehabilitation projects to be funded from operating accounts. Our proposed budgets for these types of programs are $41 million above the FY1990 enacted level.

Question: Do you have a Department-wide analysis of the priority areas for additional maintenance funds? What criteria are being used to set maintenance funding priorities, and are these criteria being applied consistently and on a Department-wide basis?

Answer: The analyses at the Departmental level were done on a bureau-by-bureau basis for both construction and for operations.

There is no Departmentwide construction project listing for Legacy 99 rehabilitation projects. Unlike dam safety projects, where there are similar types of projects which can be rated for degree of hazard and condition of facility, basic facility rehabilitation projects are too numerous and far too varied to attempt to integrate them into one Departmentwide list. Instead, the goal for each bureau is to substantially reduce the backlog of rehabilitation projects by 1999. Within that time frame bureaus are to follow their own priority setting systems using their own criteria. The Department has provided overall guidelines for development of construction schedules over the eight-year period as follows:

1. The schedule is to include only those major projects to repair, reconstruct, or rehabilitate facilities, such as buildings, water and sewer systems, etc., and the planning and design required for such projects.

2. Highest priority should be given to those projects which are required because of health, safety, or environmental concerns.

3. High priority should also be given to those projects whose purpose is to protect the resource.

4. Priority should also be given to those projects which are located in those areas which provide recreation to greatest number of people.

For operational maintenance the goal is to gradually increase operational and cyclic maintenance levels to optimum levels by 1999. Those levels are difficult to quantify for operational maintenance because of the variety of types of facilities operated by the bureaus. Furthermore, the bureaus are in various stages of developing or using their maintenance management systems. Therefore, we are relying on the bureaus to develop and justify the optimum funding levels. Cyclic maintenance and small repair programs funded under operations accounts are more easily quantified. Thus, we have more information on maintenance levels for the Fish and Wildlife Service and the National Park Service, than we do on the Bureau of Land Management. We will continue to refine and update information as it develops.

Land Acquisition

Federal land acquisition for the parks, forests, and related purposes is very popular with many in Congress. A number in Congress are supporting a bill titled the American Heritage Trust Fund. That bill would automatically appropriate $900 million annually for federal land acquisition. I do not support that bill because I believe that automatic appropriations for such discretionary purposes are inappropriate. Beyond that, I think we have to ask ourselves how much new federal land acquisition is absolutely necessary in these times of budgetary austerity--and I think that when you look at the present balance sheet for the country and the bipartisan budget talks that Congress and the Administration are conducting, austere is the proper description.

Question: Secretary Lujan, in your view how does the priority for the $161.2 million requested for land acquisition by the Bureau of Land Management, Fish & Wildlife Service and National Park Service compare with the priority for other missions of your Department?

Answer: The land acquisition request at the 1991 budget level is a very high priority for the Department and for the

Administration and represents one of the major initiatives in this budget request.

Question: I am not proposing to eliminate land acquisition altogether, but if your Department had the discretion of where to allocate a five percent funding reduction, would a disproportionate share of such a reduction be from the land acquisition requests of $24,300,000 for the Bureau of Land Management, $56,700,000 for the Fish and Wildlife Service, and $80,200,000 for the Park Service?

Answer: If there were a five percent reduction, the Department would have to evaluate its application on a case by case, program by program basis. The Department would attempt to maintain on-going operations and service while seeking to retain the important initiatives in the 1991 budget, especially Legacy '99 and America the Beautiful. The Department would not recommend allocating the entire reduction to land acquisition.

Offshore Oil and Gas Leasing

Mr. Secretary, one of the most controversial programs within your Department has been the Outer Continental Shelf (OCS) oil and gas leasing program. Congress has included at least some form of OCS leasing moratoria in each of the last nine Interior Appropriation Bills.

President Bush allayed much of this controversy when he announced delays of several years, pending further study and review, of a number of planned Outer Continental Shelf oil and gas leasing sales. These delays included sales planned off Washington, Oregon, California, southwestern Florida, and New England. However, the President's announcement did not include delays for one notable area of controversy, Lease Sale number 121 off the Mid-Atlantic States.

Question: What is the rationale for not extending the same protection and considerations to this area as were granted to the other areas for which leasing moratoria had been included in previous Interior Appropriation bills?

Answer: The President's decision was based on the OCS Task Force's careful review of the issues involved in three lease sales: Lease Sale 116, Part II, of the coast of Florida; Lease Sale 91, off the coast of northern California; and Lease Sale 95, off the coast of southern California. In addition, the work of the Pacific Northwest OCS Task Force was considered in the President's decision to support the Secretary's recommendation that leasing be deferred in the area of Lease Sale 132 until a series of environmental studies are completed. Similar to the cooperative process related to the Pacific Northwest Task Force, the Department and the State of North Carolina are engaged in a consultative process to review the Mobil Exploration Plan offshore North Carolina. These processes illustrate the Department's commitment to resolving concerns raised by States and local jurisdictions regarding OCS activities. It should be recognized that each area is unique in terms of environmental and natural resources and that decisions applicable to one area may not be applicable to another.

Question: Given the fact that the Department has previously promised to delay Lease Sale 121 pending completion of an environmental impact statement for an exploratory well off North Carolina, is it likely that the Mid-Atlantic sale could go forward in fiscal year 1991?

Answer: Lease Sale 121 will not take place in FY 1991.

Question: If a lease sale is unlikely in FY 1991, why shouldn't the Mid-Atlantic States receive some formal announcement of that fact?

Answer: When a formal change is made to the leasing schedule, the Mid-Atlantic States will be immediately apprised of that fact in writing.

Question: If the Department is unwilling to provide the same level of protection to the Mid-Atlantic states as the President has provided to New England and the West Coast, for example, why shouldn't the Interior Subcommittee provide that protection in the form of a leasing and pre-leasing moratorium again this year?

Answer: Since the sale will not occur in Fiscal Year 1991, a moratoria is unnecessary. Furthermore, moratoria remove any incentive to the affected parties to continue the consultative process to address, or resolve differences. The Pacific Northwest OCS Task Force agreement has proven the success of the consultative process with the affected States. The Department intends to carefully review the Mid-Atlantic area as it develops its next OCS 5 year program for 1992-1997.

Question: When is the Department scheduled to release the next draft five-year OCS oil and gas leasing plan, and is it possible that Lease Sale 121 would be delayed until that planning cycle?

Answer: The Draft Proposed Program is scheduled to be distributed by the end of December 1990. At this time, future sales activity on the current program schedule is under review. The status of Sale 121 is indefinite pending the outcome of this review.

Question: Changing topics slightly, Mr. Secretary, can you explain the Administration's rationale for delaying OCS leasing decisions on the one hand, while at the same time, the Administration is proposing, in the Department of Energy, a crash program of near-term research and technical assistance for the onshore oil industry to reverse the sharp decline in domestic oil production?

Answer: The President's decision on the OCS leasing was made after careful review of the OCS Task Force report. Above all, the President's decision seeks a balance between the need to provide energy for the American people, while at the same time recognizing the need to protect unique marine coastal environmental resources. The decision to delay OCS leasing in some areas will allow for the gathering of the necessary information to make informed and balanced decisions on leasing, as well as allow time for resolving the concerns that have resulted in annual moratoria covering much of the OCS program. The President's goal is to create a carefully targeted OCS program that responds to local environmental concerns and that ensures the development of the Nation's offshore resources.

I'm not sure I'd describe the DOE effort as a "crash program". We do need to take steps regarding onshore production, as recent events in the Middle East made clear. I'm in favor of these steps, as long as they are environmentally sound. As I understand the DOE oil research program implementation plan, the main thrust is to address the problem of abandonment of onshore fields reaching their economic limit, and to preserve access to these fields to allow the application of advanced oil recovery techniques. The proposed program would be a partnership effort, including industry, states, academia, as well as DOE.

Mr. Secretary, a lot of attention has been paid to the issue of oil spills from tankers in the fifteen months since the disastrous *Exxon Valdez* incident on March 24, 1989. Most recently, the Norwegian Supertanker *Mega Borg* was in the news. None of these incidents, however, has involved an OCS production platform.

Question: What is the Administration's rationale for continued study and delays in the OCS oil and gas leasing program when the principal domestic oil spill incidents over the last twenty years have all been caused by tankers?

Answer: It is true that in terms of risk of the volume of oil discharged into the marine environment, a tanker spill, such as the *Exxon Valdez*, or *Mega Borg* incident, poses a greater danger, in terms of spill volume, than OCS oil and gas leasing operations. However, many coastal residents remain concerned about the consequences of oil and gas leasing. The Administration is committed to ensuring that OCS oil and gas leasing and development occurs in an environmentally sound manner. The President's recent decision will allow the necessary time to put in place a framework for a more targeted OCS program. The Administration recognizes that we must fully investigate and document environmental concerns, such that leasing will be able to proceed in an environmentally sound manner in areas where there are significant energy resources.

Question: From an environmental standpoint, isn't OCS production coupled with pipelines to onshore facilities less threatening than importing the same quantity of oil coming from foreign sources by tanker?

Answer: Historical data indicates that OCS production and pipeline transport is less threatening in terms of risk of volume of oil spilled into the marine environment than importing the same quantity of oil by tanker.

Alaska Subsistence Hunting Management

Changing subjects, recently the Alaska Supreme Court ruled in the law suit *McDowell v. State of Alaska* that the State cannot enforce subsistence hunting regulations which discriminate between rural and urban residents.

Consequently, the State will no longer be able to act as your agent in the enforcement of the Department of the Interior's subsistence hunting regulations under the Alaska National Interest Lands Conservation Act.

Question: It is my understanding that your preliminary estimate is that the State Court decision will require the Department to spend an additional $15 million to enforce the subsistence hunting provisions of ANILCA. Is that correct?

Answer: The Department's reprogramming letter dated June 29, 1990, estimates that $2.3 million will be needed for the last three months in FY 1990. For FY 1991 the Department's preliminary estimate is $14.4 million.

I am told that this estimate of $15 million was hurriedly established and was based on interim regulations which the Department published just a few weeks ago.

Question: Is this a fairly firm cost estimate or might the requirement vary significantly as your land managers gain more experience administering subsistence regulations in Alaska?

Answer: The Department is continuing to review the $14.4 million. It is true, however, that the estimate may change as we gain experience in operating the program.

Question: What is the potential that your funding requirements for FY 1991 will change further due to subsequent law suits?

Answer: The Department does not anticipate FY 1991 funding requirements to change significantly due to law suits, although the Department can not rule out that possibility.

Question: Given the magnitude of this unbudgeted, but necessary, requirement, how does your Department intend to fund this new subsistence hunting responsibility?

Answer: If this requirement cannot be addressed in the 1991 bill, the Department will seek to reprogram the needed funds.

Global Change Research

Our nation's attention to the global change issue is continuing to increase. New knowledge gained through the ability to observe earth from space and the ability to more precisely monitor the earth's atmosphere have led to greater understanding and increased concern regarding global change.

Government-wide, Congress provided $659,300,000 directly for this initiative in the FY 1990 appropriations bills. On February 6 of this year, the Senate unanimously passed S. 169, the National Global Change Research Act.

The Committee on Earth Sciences, a Federal interagency group, has written a report describing the President's global change research program for FY 1991. The report, " Our Changing Planet: The FY 1991 U.S. Global Change Research Program", outlines an accelerated and expanded program.

This Subcommittee has reviewed the FY 1991 budget requests for all of the agencies for which we have jurisdiction. In examining those budget proposals, we have found a multitude of individual funding requests spread among six different agencies in your Department.

Government-wide the President is requesting $1,034,100,000 for the FY 1991 global change research program, an increase of $374,800,000 or 57 percent over the FY 1990 enacted level of $659,300,000.

The Department of the Interior is proposing a FY 1991 global change research program of $43,700,000. This is a $30,400,000 increase or 229% over the FY 1990 level of $13,300,000.

Question: Secretary Lujan, would you briefly describe how the additional $30,400,000 increase would be used?

Answer: The Department of the Interior, as steward of much of the Nation's land and natural resources, provides a "living laboratory" to support the U.S. Global Change Research Program (USGCRP). I am pledging that the Department's unique scientific and technological resources will address the national and international concerns with global change. Interior's proposed FY 1991 Global Change Research Program budget of $43.7 million will continue and expand research activities involving the Earth sciences, ecosystems, habitats, water resources, and human activities.

Six Interior Bureaus and the Office of the Secretary have proposed research in FY 1991 as part of the USGCRP. I provided the Subcommittee the following descriptions of the research projects that the Bureaus plan to undertake.

Bureau of Land Management (BLM): $2.4 million BLM will conduct a research and long-term monitoring program on factors possibly related to global warming. These studies will focus on physical and biological factors over large geographic areas at the species and ecosystem level. This research will use a variety of public lands including rangelands, wilderness areas and Arctic areas. These studies will establish baselines for identification of trends for comparison and understanding of ecosystem response. This effort will also enable the Bureau to predict the effects of future changes and prepare for future natural resource and land management practices and activities.

Fish and Wildlife Service (FWS): $3.6 million FWS will perform an assessment of likely impacts of climate change on species and habitats, focusing first on estuarine ecosystems; improve monitoring techniques which better assess populations, habitats, diversity and their rate of change over time; and conduct studies to both understand and predict the effect of sea-level rise on coastal wetlands systems.

National Park Service (NPS): $3.0 million NPS will develop and implement an integrated research inventory and monitoring program focused on Parks, mostly Biosphere Reserves, and in representative biogeographical areas to study global climatic change. Because National Parks are pristine areas, often containing relict communities, high elevation communities, and species populations likely to be particularly sensitive to climate change, they serve as important laboratories in the effort to evaluate global climate change. NPS will continue research on wetlands and coastal zone areas to measure, predict and comprehend the rates of climate change in these sensitive areas.

U.S. Geological Survey (USGS): $28.2 million USGS will perform global change research in the mapping, geology and water resources divisions. In the mapping division, work will continue on the design and development phase of the Land Data and Information Management System, to establish national and international information exchange networks, accelerate preservation and maintenance of over 1 million Landsat scenes, and initiate land surface characterization research for global change modeling.

In the geology division, work on paleoclimates, polar climates, and arid regions will be expanded and new research on biogeochemistry and volcanic emissions will begin. Work will continue in the area of wetlands.

In the water resources division, work is focused on how climate variability and change affect, and are affected by, hydrologic processes; the development of methods for evaluating the sensitivity of diverse surface-water and ground-water systems to changing climatic conditions; and the processes associated with the generation and disposition of naturally occurring greenhouse gases.

Minerals Management Service (MMS): $3.6 million MMS will examine existing long-term data bases of hydrographic properties in the Gulf of Mexico and monitor certain hydrographic properties and indicators of air-sea interaction to detect evidence of climate change. The Service will also perform marine Arctic indicator species studies. These studies will build upon established monitoring programs for key indicator species, including bowhead whales, ringed seals, and marine colonial seabirds/water fowl in the Arctic.

Office of the Secretary: $0.5 million Within the Office of the Secretary, the Office of Program Analysis will expand its role in the coordination of the program. In addition, the Office will track, monitor and actively participate in the activities of the Intergovernmental Panel on Climate Change (IPCC).

Bureau of Reclamation: $2.4 million The Bureau of Reclamation will study the "greenhouse" effect of potential global climate change on watersheds in the Western United States. The scope of the study includes collecting environmental data, creating new models, and preparing inventories of watershed sensitivity to global climate change for selected water-short river basins in the West.

Question: Can you explain how all your numerous agencies are possibly coordinating their efforts within the Department and within the agencies of other departments to avoid a duplication of work?

Answer: As the Committee on Earth Sciences (CES) developed its framework for the U.S. Global Change Research Program, seven evaluation criteria were used in reviewing each Departmental and each individual Bureau research project. One of these criteria was linkages - which insures that each research project is linked to scientific efforts within other Federal departments, the academic scientific community and the international research field.

Like the CES, the Interior Department has ensured that each individual Bureau global change research project is reviewed carefully so that duplications are avoided, opportunities for cooperative efforts are expanded, and that the research the Department conducts complements that undertaken by other Federal departments.

To further this idea, the Bureau of Land Management held a conference in Denver in March 1990 to "flush out" where the Department might arrange localized cooperative research efforts. Regional level coordination among various agencies is the next step to assure development of strong interagency projects which build on the various assets and the scientific and technological expertise available within participating research organizations. These assets include access and control of key study sites on Federal lands, logistical support readily available through field offices and on-site field support staff, and research facilities and related logistical support equipment and capabilities. Interagency related logistical support at the regional level will not only avoid duplication of research activities will also multiply the effectiveness of research funding.

The Denver conference identified four regions where meetings would greatly benefit the difficult but essential task of interagency coordination. These broadly defined regions include the Arctic, the Southwestern United States, the Great Basin Region, and the Southeastern U.S. and Coastal Regions. These regional level meetings will mostly like be held later in the summer, and will likely include the academic community. The third day of the Denver conference, specifically structured to promote interagency coordination of global change research planning and related activities, resulted in a number of excellent ideas.

A similar session was conducted by the National Park Service in May 1990 in New Orleans. At the NPS conference, scientists and program managers from different Interior Bureaus and other Departments listened to presentations made by various parks proposals for global change research, and evaluated those proposals based on the scientific merit of the hypotheses.

At conferences such as these (several more are planned), Interior Department and other Federal scientists and researchers in the field have the invaluable opportunity of sharing information about their projects, and can determine specifically they might further join forces.

The following is a review of the research linkages each Interior research project has not only to other Interior Bureaus or Federal agencies but also internationally. This list is not inclusive, for two reasons: linkages often exist on a scientist-to-scientist basis, and a number of linkages are currently in the planning or negotiation stage.

Bureau of Land Management

Study: Ecological Change in Environmentally Stressed Ecosystems of the Western and Northern United States

This research will build on longstanding and ongoing cooperative agreements with major universities in all the Western States and Alaska. The research would also build on existing and longstanding interagency agreements with many Federal agencies, including the Forest Service, the National Park Service, Fish and Wildlife Service, the U.S. Geological Survey, the Bureau of Reclamation, the Agricultural Research Service, the Soil and Conservation Service, the National Weather Service, EPA, and the Department of Defense.

Fish and Wildlife Service

Study: Coastal Wetlands and Change Dynamics

Partnerships and agreements are in place with NASA, NOAA, USGS, and the States of Louisiana and Florida, as well as 40 major universities that may be brought to bear on this project.

Study: Monitoring Fish and Wildlife Impacts

Partnerships and agreements are in place with the Canadian Wildlife Service, the 50 States and several other agencies and organizations that could be used to facilitate this project.

National Park Service

Study: Integrated Studies of National Park Ecosystems

National Park Service Cooperative Park Studies Units at regional universities facilitate development and implementation of research at the selected sites. Participation in the network of biosphere reserves enhances opportunities for regional and international cooperation. The sites are extensively used by outside investigators. Research programs are linked with ongoing public educational programs on regional and global environmental issues.

Study: Dynamics of Coastal Systems

National Park Service Cooperative Park Studies Units at the University of Rhode Island and the University of Georgia focus on coastal research questions. An interagency program with the U.S. Navy that includes a number of university linkages focuses in part on the sediment dynamics of sound waters and adjacent shorelines in one area of Georgia. General park experience with visiting scientists provides a basis for facilitating the conduct of research in the designated parks. Linkages of these types facilitates both scientific communication and partnerships and also the provision of support to scientists in the field. In addition, the presence in many parks of public interpretive programs provides an avenue for increasing public awareness and understanding about global warming by linking the visiting public directly to the research being conducted in the parks.

U.S. Geological Survey

Study: Coastal Erosion and Inundation

This project interacts with projects in the National Oceanographic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), the National Air and Space Administration (NASA), the Department of Energy (DOE), and the Army Corps of Engineers. It is also a cooperative effort with the coastal states, and with the U.S. Fish and Wildlife Service, with which the USGS coordinates for wetlands protection, restoration and research efforts.

Study: Permafrost

The USGS has developed international linkages to carry out this research and monitoring effort in cooperation with the Geological Survey of Canada and the Ministry of Geology in the USSR. Within the United States, this research has linkages to NOAA, NASA, DOE, and the U.S. Army Cold Regions Research and Engineering Laboratory.

Study: Interaction of Climate and Hydrologic Systems

The USGS is already participating internationally with the World Climate Research Programme (organizing a set of high quality time-series of streamflow) and as a key participant in most of the international sea-ice studies and sea-ice remote sensing with the Norwegians, the French, and with NASA. The USGS is linked with the climate model development activities at NOAA's Geophysical Fluid Dynamics Laboratory and at the National Center for Atmospheric Research by having USGS hydrologist working as part of the research teams at both sites. Planned linkages include USGS-funded data collection of research at NSF sites. Additional linkages to the Global Energy and Water Exchange Experiment are being pursued.

Study: Land Surface Data System

This initiative has received strong endorsement by the heads of NASA, NOAA, NSF, and the Interagency Working Group on Data Management for Global Change. The USGS program is fully consistent with the programs of this Interagency working group. Other linkages include the NASA-USGS Coordination Committee for Data management, and cooperation with NOAA on data archiving and data reception and processing.

Study: Paleoclimates Research

USGS paleoclimates research has strong linkages to the academic community of modelers and paleoclimatologists funded through NSF. The USGS has recently forged international links to carry out paleoclimates research in direct cooperation with Canada, the USSR, Japan, Iceland, and the People's Republic of China.

Study: Climates of Arid Regions

USGS research efforts in desertification have cooperative links with NASA, NOAA, the U.S. Army, and USDA.

Study: Biogeochemistry of Greenhouse Gases

The USGS has established strong scientist-to-scientist cooperative relationships with researchers in the Department of Energy, NOAA, and NASA, and in several foreign countries. Discussions have begun with NOAA on a joint research and monitoring plan on sequestration of atmospheric CO_2 by terrestrial systems.

Study: Biogeochemical Research.

USGS research on the history of biogeochemical dynamics and cycles has linkages with research in academia supported by NSF, as well as with other Federal agencies, particularly NOAA, DOE, and EPA.

Study: Volcano Emissions

The USGS has volcano observatories are part of a cooperative international network of volcano observatories, and USGS scientists maintain active collaboration with colleagues in many of these observatories. The USGS observatories are also lined with U.S. universities, notably the University of Hawaii, University of Washington, and University of Alaska. Links with the University of Washington and NOAA's Pacific Marine Environmental Lab are developing on the subject of a submarine volcano observatory.

Study: Land Surface and Geographic Characterization

This project is based on a collaborative strategy which supports and augments the process and modeling expertise of other agencies and universities with the geographic/cartographic expertise of the USGS in land characteristics.

Study: Sensitivity of Hydrologic Systems

The USGS is working with the Bureau of Reclamation on this project. Both Bureaus have discuss the plans for this project with State and local water officials and will be consulting with them as the project proceeds. The linkage to the actual resources managers is crucial for the results of the research to be implemented as part of the Nation's approach to managing water resources in a state of climate uncertainty.

Minerals Management Service

Study: Ecosystem Stress

This project will be coordinated with other programs sensing physical parameters (including sea ice, solar input, cloud cover, marine and atmospheric temperatures, etc.) and certain biogeochemical factors, such as marine chlorophylls, to enhance the linkages between their respective data sets. The MMS studies will continue to be fully coordinated with the U.S. Fish and Wildlife Service, NOAA, NSF, and appropriate universities. Copies of all oceanographic data are provided to NOAA's National Oceanographic Data Center for archiving. MMS's Arctic research is coordinated with the Interagency Arctic Research Policy Committee, and appropriate international organizations.

Study: Physical Oceanography

The Gulf of Mexico proposals have incorporated academic suggestions. MMS has surveyed other ocean-oriented Federal agencies to identify comparable ongoing or proposed physical oceanography in the regions. The MMS studies will continue to be fully coordinated with NOAA, NSF, and appropriate foreign governments. MMS has already established a dialogue with Mexico and Cuba. Copies of all oceanographic data are provided to NOAA's National Oceanographic Data Center for archiving.

Bureau of Reclamation

Study: Regional Studies

The Bureau of Reclamation has begun modest climate change study program with the EPA (Colorado River Basin), the TVA (power systems) and NAS (leading to a fall 1990 symposium).

The Committee on Earth Science's role is still being defined. Committee task forces are being formed to discuss such important items as monitoring, international outreach, and so forth.

Question: How can you look to the Committee on Earth Sciences for management of the national global change research program when its role is still undefined?

Answer: The CES Working Group on Global Change has developed, during the past two years, an integrated and priority-driven framework to guide the development of the U.S. Global Change

Research Program. The CES and the participating agencies have approved that framework which includes: an overarching and focussed goal for the program, three specific objectives, a three-level set of program and science priorities to structure program development, a set of agency roles, and a set of program and project level evaluation criteria. These are all detailed in the 1990 USGCRP Research Plan, published in July 1989.

This framework is an essential part of the overall program and budget development strategy of the CES, and provides the structure within which the CES evaluates and develops: the essential, high priority components of the USGCRP, and the recommended budgets to support those critical components.

The CES in applying these elements of the program and budget development framework, works within an overall OMB (with agency endorsement) "Terms of Reference" document that sets overall and specific fiscal year budget targets for the detailed development of the annual budget recommendations. Taken together, these serve as a framework for the CES to develop and recommend to the CES agencies and to the OMB, the highest-priority programs and project elements that are required for an integrated U.S. Global Change Research Program that supports key elements of U.S. global change policy interests.

Question: How can we be assured that the highest priority work will be addressed?

Answer: The Congress can be assured that the highest priority work will be addressed in both the Interior Department and across the USGCRP governmentwide. The CES created and implemented a multi-level priority-setting framework that was used to focus and integrate program development and budget proposals. This framework contains priorities which focus on those research questions that will provide significant improvements in understanding and modeling the interactive Earth system. The program has concurrent progress in high priority activities in all science elements, although not all science elements receive equal emphasis in the USGCRP.

At the outset of the USGCRP, CES developed and set of role statements that specifically define each agency's respective role in the Program. The Department of the Interior, which has research proposed in six of the seven science elements, plays the following role in the USGCRP: to address the collection, maintenance, analysis, and interpretation of short- and long-term land, water, biological, and other natural resource data and information. Such efforts include, but are not limited to, monitoring of hydrologic and geologic processes and resources, land use, land cover, and biological habitats, resources and diversity.

When the Department developed its proposed FY 1991 Global Change Research Program, careful review was given to all project proposals to insure that the Department delivered on this role in the USGCRP. The research the Department seeks to undertake is balanced and integrated, and brings Interior's unique resources to bear on the important scientific questions posed in the USGCRP.

Question: How will your Department's research be monitored?

Answer: I established the Interior Council on Global Climate Change in October 1989. The Council, chaired by the Under Secretary and comprised of senior policy officials, advises and assists me in developing and implementing policies and strategies to response to the impacts of potential global change on Departmental programs. The Council also makes recommendations for global change research within the Department.

As stated above, the Interior Department has ensured that each individual Bureau global change research project is reviewed carefully within the Department so that duplications are avoided, opportunities for cooperative efforts are expanded, and that the research the Department conducts complements that undertaken by other Federal departments.

Secretary Lujan, you are asking for $500,000 and 2 additional full-time equivalent positions for FY 1991 in the Office of the Secretary to support this initiative. Last year the Office of the Secretary was funded at zero for global change research. Justification material provided to the Subcommittee indicates that these funds will be used to coordinate the Department's global change studies.

Question: Isn't that a task already being performed by the Committee on Earth Sciences? Why is another layer of coordination necessary?

Answer: This internal coordination is not done by the Committee on Earth and Environmental Sciences (CEES). In fact, CEES expects each Department to coordinate its own program since each Department has only one voice at the CEES table. For Interior, this voice must represent all bureaus participating in the Global Change Research Program (GCRP). Because of the wide scope of Interior's interests and expertise, and because, to some extent, all bureaus (and Departments) are competing for the same dollars, oversight and coordination should be from the Secretary's Office. In fact we would be derelict in our duties if we did not ensure such internal coordination within the Department to ensure that there is no duplication, and that bureaus take every opportunity to use each others' strengths and studies.

The Geological Survey is funding one of two full-time people assigned to the Committee on Earth Sciences. In addition, the Committee chairman and a Committee member is being provided to the Committee on Earth Sciences from the Department of the Interior. Secretary Lujan, now you are requesting two more people in your office to work on global change research issues.

I note that, while the Departments of Energy ($66 million) and Agriculture ($47.4 million) are requesting more money for global change research, Interior (with the smallest budget request, $43.7 million) is the only department which is requesting funding within the Office of the Secretary in FY 1991.

Question: Why is an increase in your office required for the global change initiative and what specifically will be accomplished with these funds?

Answer: To note a point in your question, USGS personnel assigned to CEES work specifically to fulfill Dr. Dallas Peck's obligations as Chairman of that group and not as coordinators of DOI's programs.

The additional $500,000 and 2 FTE requested by the Office of the Secretary for Global (including climate) Change is for a variety of activities. Coordination of the Department's global change studies is only one of these activities. As our budget justification indicates, these other activities are related to the development and analysis of policies addressing climate change and its impacts.

As noted previously, it is critical for Secretary's Office be involved actively in such policy-related exercises because climate change potentially affects each and every bureau within the Department. Specifically, it would affect:

The distribution and abundance of water, thereby affecting the ability of water supplies to meet demands. This would directly impact Bureau of Reclamation, Bureau of Indian Affairs and the U.S. Geological Survey's water programs.

The health, distribution and abundance of all living species and ecosystems including those on lands managed by the Department. This would directly affect Fish and Wildlife Service, National Park Service and the Bureau of Land Management.

The health and productivity of forests, grazing lands and agriculture. Because many Indian lands are in the arid southwest, the effects on many tribes could be critical. In other areas, the effects on the productivity of land could have significant economic impacts to Indian communities. Similarly, BLM lands could be affected.

Sea level, which is expected to rise because of climate change. This would affect coastal wetlands, present and past island territories, National Seashores and the several cultural resources located on the coast and entrusted to the Department's care. Sea level rise would affect Territorial and International Affairs as well as FWS, NPS and USGS.

The Department's coal, oil and gas programs if steps are taken to reduce carbon dioxide and methane emissions. These would affect BLM, Minerals Management Service, Office of Surface Mining, Reclamation and Enforcement, Bureau of Mines and Tribes who own such resources.

Clearly, the wide scope of the potential impacts of climate change and policies addressing climate change requires direct involvement from the Secretary's Office.

The specific activities for which funding is being requested in addition to coordinating global change studies include:

Tracking, monitoring and actively participating in the Intergovernmental Panel on Climate change's (IPCC's) activities, particularly those that relate to policies on climate change that would deal with use and management of water, land and other natural resources including biological diversity and natural and unmanaged ecosystems. It should be noted that IPCC reports issued so far could clearly influence U.S. internal policy in these matters. The U.S. and other Governments around the World have established the IPCC to serve as the major forum for international deliberations on the issue of climate change. The importance of the IPCC cannot be understated because climate change is indeed a global environmental issue where the pace, direction and content of domestic policy is being set by international events, and any efforts to deal with it must be global in scope to be effective and successful. Active participation means attending selected meetings, and as necessary accepting assignments to write pieces of relevant reports, serving as officers of subcommittees and task forces;

Serving as the Department's representative on other interdepartmental and intergovernmental groups dealing with climate change policy. This involves coordination within the U.S. Government;

Coordinating input and activities within each bureau with respect to the IPCC and other interdepartmental and intergovernmental groups;

Conducting limited policy analysis to support Interior's activities related to the upcoming negotiations on an international framework convention on climate change. The President has agreed to host the first negotiating session in the U.S. in February, 1991. The convention itself is expected to be completed in 1992, and could lay down ground rules which will not only affect energy use in this country, but also affect use and management of all natural resources (e.g., water, land, fish, wildlife, forests, biological diversity, grazing, coal, oil and gas extraction, etc.). Because of the scope and potential impacts on Interior's mission and programs it is critical that Interior undertake such policy analysis, and

Furnish staff support for the Interior Council in Global Climate Change.

Landsat Satellite Funding

During his testimony this year, Dr. Dallas Peck, Director of the Geological Survey, indicated that the Administration is not requesting FY 1991 funding for operation of Landsats 4 and 5. FY 1989 was the first year that the satellite funding was not provided entirely by the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce. The funding for the first half of FY 1989 was paid by NOAA and the last half of FY 1989 was financed by contributions from various Departments. I recently approved a reprogramming request for the second half of FY 1990 to cover satellite funding.

At a June 12 hearing before the Senate Committee on Commerce, Science, and Transportation, I understand that Tom Pyke, the Assistant Administrator for Satellite and Information Services of the National Oceanic and Atmospheric Administration stated that the FY 1990 user funding arrangement was so successful that user agencies will be asked to pay for the satellites again in FY 1991.

Question: Secretary Lujan, would you please comment on what is happening with the Landsat program? Why is the Administration continuing to ignore the Landsat financing problem?

Answer: The Administration has gone on record, most recently in correspondence from Vice President Quayle to the Congress, as being committed to operation of Landsats 4 & 5 until their demise. The Department of Commerce, NOAA, as manager of the Landsat program has indicated in answer to questions posed at its March 29 hearing before the Senate Committee on Appropriations that funding for Landsats 4 & 5 has not been requested because these satellites are well past their design lifetimes.

Question: Is this the Administration's method of reshuffling to set different priorities than Congress funds?

Answer: I do not think so. The Administration is attempting to balance competing priorities with limited resources.

Question: What is the status of Landsat 6? In what Department can we expect to find Landsat 6 operational costs requested?

Answer: The Department of Commerce (DOC) will continue to oversee the development and launch of Landsat 6, and funding for launch costs are covered in the DOC FY 1991 budget. Operation of Landsat 6 will be the responsibility of the EOSAT corporation, the Landsat commercial operator.

Question: Are there plans for a Landsat 7?

Answer: The National Space Council is conducting a study of the options to ensure the continuity of Landsat-type data capability after Landsat 6. The results of the study will be available in time to influence the development of the FY 1991 budget.

I agree that these satellites should be the funding responsibility of the Department of Commerce. I approved the FY 1990 Landsat reprogramming request that has been submitted to the Subcommittee, but I hope that you will carry back the message to the Administration that I will not recommend FY 1991 funds in your Department for Landsats 4 and 5.

Funding for Indian Programs

Mr. Secretary, I note that the FY 1991 budget request for the Bureau of Indian Affairs is a marked change from prior budget submissions. Many of the operational increases provided by Congress last year are continued in the FY 1991 request. I commend you for your efforts to be sensitive to the priorities of Congress. My good friend Danny Inouye is Chairman of the Senate Select Committee on Indian Affairs, and he keeps me well informed of the many needs in Indian country. We do our best to address those requirements in the Interior appropriation bill. But our resources are not unlimited. These requirements are a

priority, Mr. Secretary, and I urge you to continue your emphasis on addressing the basic human needs of our first Americans.

In attempting to fulfill the trust responsibility between the United States Government and the Indian people, the Bureau of Indian Affairs must exert special attention to the management of those programs provided for their benefit. Last fall, the Special Investigations Subcommittee of the Senate Select Committee on Indian Affairs issued its report about the protection of the fundamental trust responsibility for Indian people.

Question: What actions have you taken to increase managerial accountability for Indian programs?

Mr. Secretary, what can be done to instill greater accountability and responsibility in departmental decision-makers? What assurances can you provide the Committee that your proposal won't just generate more reports whose recommendations go unheeded?

Answer: Many of the managerial accountability problems found in Indian programs have a long standing history and will not be corrected in a short period of time. Part of the strategy to increase accountability is to encourage and assist tribal governments toward self-determination by increasing their contracting of BIA operated programs. This means that tribal governments, which are accountable to their citizens, will be in control of program and service delivery. In addition, the Department has taken a number of initiatives to improve managerial accountability. These include:

Establishing a Task Force on American Indians to better coordinate Indian issues raised by the Special Committee on Investigations of the Senate Select Committee on Indian Affairs. The Task Force is chaired by the Under Secretary's representative and includes representatives of all the Assistant Secretaries. I look to this group to recommend changes in Departmental policies, programs and procedures necessary to respond to the Senate Select Committee's report.

Creating a Working Group on Indian Water Settlements to coordinate negotiations on Indian water rights issues. This group coordinates the views and considerations of the Department's bureaus and works with the Department of Justice and the Office of Management and Budget in arriving at a consolidated Administration position on proposed water settlements. Much progress has been made in this area. These settlements are vital because water can be a key foundation for reservation economic development.

Organizing a Departmentwide Management Controls and Audit Follow-up Council under the direction of the Under Secretary. Much of the Council's focus is on the BIA since it has 11 of the Department's 25 outstanding management control deficiencies (material weaknesses). This group meets quarterly.

Requesting FY 1991 funding increases to establish: 1) an Office of Quality Assurance within the Under Secretary's office that will provide support and oversight of BIA management ($.5 million); 2) a monitoring and evaluation effort of BIA-funded schools in order to improve accountability of education officials to parents, school boards and tribal governments ($1.0 million); 3) a viable Total Quality Management (TQM) program within the Department that will train the Department's senior and mid-level managers in creating an environment that emphasizes an improved way of performing work with fewer errors resulting in greater customer satisfaction ($.4 million).

Continuing to work with the BIA facilities and line managers through our Office of Construction Management which has led to substantial progress in meeting Congressional directives related to BIA's Facility Management Program. In addition, this office has undertaken a nationwide program of training for facility managers and staff.

Establishing an Office of Trust Fund Management with the authority and responsibility to improve management of these resources we hold in trust for the Indian people.

Put into place other organizational changes, such as a separate organization for Indian Education, so that vital functions are given appropriate priority in the Department.

Question: Current speculation in Indian country is that there may be attempts by the Administration to dramatically reorganize the BIA and redistribute some of its functions among other executive branch agencies. Would you please explain?

Answer: Let me assure you that there is no active consideration within the Department to redistribute major portions of the BIA to other executive branches. I am considering some reorganization within the Department which might include the identification of specific programs which could be more effectively operated outside the existing BIA. If I think that such reorganizations will dramatically improve the management efficiency of bureau programs, then I assure you that such changes will be made. For example, you know that I believe BIA's safety of dams program ought to be managed by the Bureau of Reclamation (BOR). So far, the Congress has not agreed with me. We need to take advantage of BOR's expertise in this area, and we could well be talking about saving lives. I need your support on this. Before reorganization actions are taken; however, I will take the necessary steps to consult with tribal governments since they will be directly impacted by such changes. My staff has consulted, and will continue to consult, with appropriate elements of the Congress so that your views are taken into account. I am confident that the Federal government's trust responsibility function and commitment to specialized Indian concerns and needs will be strengthened by our actions.

I understand that approximately 55 percent of the Bureau of Indian Affairs workforce is rated at the Grade 7 level or lower. In addition, over the past eight years, there has been a 25 percent decrease in the total number of BIA employees.

Question: Are you concerned about this trend in employment for this bureau? Wouldn't these types of staffing patterns result in considerable losses to the agency in terms of experience and productivity?

Answer: The decrease in the number of federal employees in BIA can be attributed, in substantial part, to increased contracting under P.L. 93-638. However, the Department is concerned about the staffing patterns which have developed in the BIA over the last 8 years, especially the low average grade. Clearly, our ability to fulfill our responsibilities to Native Americans resides, to an extent, in our ability to hire and retain qualified personnel to administer this responsibility.

Question: How do these ratios of lower graded employees and staffing reductions for BIA compare against the other bureaus in the Department?

Answer: The following table compares the ratios of employees above and below the GS-7 level as of June 30, 1990.

Bureau	*GS-7 & Below*	*Percent*	*GS-8 & Above*	*Percent*
BIA	4438	58.5%	3142	41.5%
O/S	258	29.6%	614	70.4%
BLM	4682	43.8%	6011	56.2%
BOR	2503	39.0%	3910	61.0%
GS	2715	30.0%	6350	70.0%
BOM	644	30.5%	1465	69.5%
NPS	9235	65.7%	4830	34.3%
FWS	2730	41.4%	3864	58.6%
SOL	99	28.0%	254	72.0%
OSM	246	23.3%	809	76.7%
MMS	514	25.7%	1487	74.3%
OIG	54	18.2%	242	81.8%

Question: What signal is sent to potential bureau employees when you are unable to retain qualified employees in your workforce?

Answer: Given the circumstances, this is a complex question to answer. As additional P.L. 93-638 contracting occurs, many of the bureau employees involved in administering these programs go to work for the tribes who administer the contracts. In fact, these employees retain their rights in the Federal retirement system. So employees are by-and-large not out of jobs. In addition, the bureau operates under an Indian preference hiring system by law, so there are many opportunities for Native American employment in BIA. I believe the Federal Government is the Nation's largest employer of Native Americans.

Question: What steps are you taking to address this problem? How can you expect dedication and hard-work from the lower end of the scale, who are the people out there delivering services, while pay raises are sought for the government's senior executives?

Answer: The principal steps involve the organizational changes we are proposing. In looking at this situation, we have concluded that insufficient top management resources exist within the bureau. We want to address these problems first and then address the questions of grade levels. I don't think the question of executive pay raises ought to be made a captive to the question of what we need to do to improve our management of Indian programs. As I indicated, we need more top managers (and these will be Native Americans by-and-large) in BIA, not fewer. I have personally seen hundreds of BIA personnel working in the field. They are dedicated and hard working. If they deserve to be higher graded under the governmental classification system, we will see that is accomplished.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Oil Shale

Question: Mr. Secretary, on June 18, 1990, BLM Director Cy Jamison sent an Instruction Memorandum to BLM State Directors in Colorado, Utah and Wyoming directing them to cease processing mineral applications for oil shale. In light of the recent decision of the U.S. District Court in Colorado, do you intend to modify that instruction to the BLM State Offices?

Answer: The Department was granted a stay on the issuance of the patents by the Courts of Appeals. The Justice Department is currently preparing the appeal of Judge Finesilver's decision. The

Department will monitor progress, working in conjunction with the Justice Department, and will ultimately take whatever action deemed appropriate to comply with the final decision.

Question: Do you intend to recommend to the Justice Department that the decision be appealed?

Answer: Yes. The Department has filed an appeal with the Justice Department on July 18, 1990 and requested a stay of the court order requiring the issuance of the patents.

Mining Patents

It has come to my attention that the House Interior Appropriations Subcommittee may include a provision in its FY 1991 bill which would prohibit the Department from obligating or expending any funds to issue patents for any mining claims located under the general mining laws which have not received first half final certificates by the date of enactment. Although the House has not marked-up its bill yet, I believe that such a provision is, at the very least, misguided. I am hopeful that you can help clarify some of the confusing points which recently have arisen with regard to this matter.

Question: It has been suggested that placing a moratorium on patenting mining claims on federal lands would not inhibit the development of mining claims. Do you agree with me that this is an erroneous assumption?

Answer: No, we do not agree that this is an erroneous assumption. The Mining Law of 1872 provides that a locator who has complied with the statutory requirements may apply for a patent to his claim. There is no requirement that a claim be patented. In fact, a valid claim may be held indefinitely and the mineral deposit mined without a patent from the United States. The exclusive right of possession given to a locator by the Mining Law of 1872 provides as many rights to the minerals underlying the land as one would have under a patent, including the right to appropriate and remove all valuable ores and minerals.

Question: It is possible that unlike leasing and other discretionary activities which can be subject to moratoria, the issuing of patents cannot constitutionally be made subject to this type of Congressional interference. Do your attorneys believe that such a constitutional question would indeed arise if Congress denied the use of funds to issue patents?

Answer: As you know, the proposed language would not affect those patent applications for lode and placer claims for which the BLM has already issued the first half of the mineral entry final certificate. Accordingly, the possibility of the moratorium resulting in an unconstitutional taking is greatly diminished. The Solicitor's Office does not see any other constitutional infirmity or problem.

Question: If such a provision were enacted into law, what is your estimate of the number of patent applications that would be affected?

Answer: We believe the proposed language would affect approximately 250 patent applications.

Question: Would there be any budgetary savings associated with a provision to prohibit the issuance of patents?

Answer: Based on the number of applications that would be affected by the provision, a maximum of about $1.25 million could be realized over several years. However, since we would be required to continue to fund adjudicator, geologist, and mining engineer positions to continue processing those mineral patent applications where the first half of mineral entry final certificate has issued and to accomplish other work associated with the Mining Law administration program, the actual savings that would be realized would be considerably less.

Mining Fee

In FY 1991 BLM budget request, the Administration has proposed the establishment of a holding fee of $100 for each mining claim. This would replace the current BLM filing fee of $5 per claim for annual assessment as well as the current requirement to perform $100 worth of annual assessment work.

It is anticipated that this shift will raise $97.5 million in revenue. Of these funds, $21 million will be used to offset the costs of the mining law program.

The justification indicates that one of the motivating factors of this proposal is "to reduce the number of claimants who have no serious intention to mine, or hold their claims solely for speculative purposes."

Question: What is the real purpose of this proposal - to enact meaningful mining reform or to provide another "smoke and mirror" device to mask the size of the budget deficit?

Answer: The inclusion of the $100 holding fee proposal in the FY 1991 President's Budget is consistent with many administration proposals to enact user fees to offset cost but it also provides an environmental benefit by eliminating the requirement for surface disturbing activities.

The current provision for annual assessment work requires that certain actions be taken to "maintain" the mining claims. Often these actions require surface disturbance and may result in short-term or long-term damage to the environment. The proposed holding fee will enable the claimant to "maintain" his claim while minimizing surface disturbance, but will not preclude or limit his ability to explore and develop the mineral deposit.

In addition, the case of those claims which are conclusively abandoned for failure to pay the annual holding fee, the lands will then be open to location by another party. The result would be to make more Federal lands available for exploration and development to those individuals and companies who truly wish to bring mineral deposits into the marketplace.

Question: How did the Department determine that 975,000 claimants would be willing to pay the fee?

Answer: The determination that 975,000 claimants would be willing to pay the $100 annual holding fee is merely an estimate based upon several assumptions. We would anticipate that 220,000 claims (or about 18 percent) could be abandoned by claimants if the annual holding fee of $100 is adopted by Congress. Thereafter, the number of new claims recorded and the number of claims abandoned should remain static. The $100 annual holding fee is established in lieu of the $100 worth of annual assessment work required currently. The outlay for the mining claimant is unchanged by this proposal. Companies or individuals who are sincerely interested in the exploration and development of Federal mineral resources will continue in their efforts in this area with or without a holding fee and with or without the requirement for assessment work. The long term benefits of developing a paying mine will be remain substantially unchanged.

Question: Is the holding fee required if assessment work is done?

Answer: As part of the implementation of the holding fee, payment of the fee would be waived in 1991 if claimants have already performed the annual assessment work for the assessment year beginning September 1, 1990, prior to enactment of the holding fee language. This waiver is not expected to have a significant effect on 1991 receipts since most assessment work is performed during the summer field season. In future years all claim holders would be required to pay the $100 fee whether or not they were actively working the claim.

Question: What do you expect will happen to the abandoned claims?

Answer: In most cases the lands would be open to location by other parties when mining claims are deemed abandoned for failure to pay the annual holding fee.

OCS

On June 26, President Bush announced his long awaited decision regarding the future of this nation's offshore oil and gas program. The most pronounced effect of this decision is that the coast of southwest Florida and more than 99 percent of the California coast will be off limits to oil and gas leasing and development until after the year 2000. Furthermore, sale 96 in the Georges Bank has been cancelled and sale 132 off the coast of Washington and Oregon has been cancelled. While I can understand the reasoning behind the President's desire to prohibit offshore drilling in sensitive environmental areas, I do not believe that our current domestic energy supply situation allows us the luxury of pursuing such a policy.

Because the President's decision has taken so many areas off the table, I am certain that other states will begin fighting to have their coasts exempted from drilling as well. It is my understanding that Congressman Walter Jones has already sent a letter to the President requesting that the moratorium be expanded to include North Carolina and other mid and south-Atlantic states.

Question: Did the Administration anticipate this to be a problem when it was crafting this decision?

Answer: Since the State of North Carolina and the MMS have been engaged in a consultative process, aimed at resolving concerns over proposed exploratory drilling offshore North Carolina, the Administration did not anticipate that this would be a problem in announcing the decision to defer leasing in some areas.

Question: How will the Administration respond to the requests it is certain to receive in the near future for additional moratoria?

Answer: The Administration opposes the imposition of additional legislative moratoria. As you know, the Department is in the process of preparing the next five-year oil and gas program. For areas not affected by the President's decision and in which sales are scheduled for consideration in the next draft program, the Department will carefully consider comments received by the affected parties. The Department will not only consider those comments in the development of the program, but will also be proposing a more targeted approach that will carefully weigh the environmental considerations and resource significance of each area proposed for leasing.

Question: Will the Administration be able to say "no" to these other states in light of its decision with regard to California, Florida, and New England?

Answer: The President's decision is a definitive effort to resolve the near and mid-term issues associated with offshore leasing and provides guidance to the Department for making future decisions in other areas., As previously stated, the Administration opposes additional moratoria.

The Florida Congressional delegation has requested the federal government to repurchase existing leases in the sale 116 area south of 26 degree north latitude. You have reportedly indicated that the Department would assist the State of Florida to repurchase these leases.

Question: Are you proposing that Florida would repurchase these leases for cash value, or are you considering a "credit" approach whereby leases may be obtained offshore Florida in less environmentally sensitive areas?

Answer: At this time, no firm decisions have been made on the process for cancellation and buy-back of these existing leases. As you know, Section 5 of the OCS Lands Act provides certain procedures for lease cancellation and for compensation of lease holders. In addition, the Department intends to proceed with negotiations with the State of Florida to develop a proposal for sharing the repurchase of the leases.

OCS/National Energy Strategy

The President's recent OCS leasing decision appears to ignore the dire straits that the U.S. may soon find itself with regard to a dependable and sustainable supply of domestically-produced energy. Despite the erroneous public perception that there is no energy supply problem in the U.S., there is an alarming trend in our energy situation that

ought to cause us great concern. For example: 1) U.S. crude oil production has fallen by 19 percent since 1973 (38 percent in the lower 48 states); 2) We are now 50 percent dependent on foreign oil and likely will be 2/3rds dependent by the year 2000; and 3) Natural gas wells completed last year were less than one-half the number completed in 1981.

Although I am somewhat encouraged by the Administration's efforts to formulate a "National Energy Strategy," I am concerned that progress seems to be painstakingly slow, and that there may not be enough intestinal fortitude to make the difficult decisions (ANWR, nuclear power, etc.) that will be necessary to devise a sound and workable policy.

Question: Mr. Secretary, what role are you and the Department playing in the development of the National Energy Strategy? Is it correct to assume that the President's recent decision is an indicator that the OCS oil and gas program will not play a significant role in the National Energy Strategy?

Answer: The Department is participating in the development of the National Energy Strategy through its membership of the Economic Policy Council Working Group on the National Energy Strategy. It is also contributing the analyses being performed by a number of subgroups formed by the Department of Energy to address specific issues. One of the subgroups is evaluating the impact of access to oil and gas resources on Federal lands to which access is currently denied, including the OCS. The results of this analysis will be considered in the formulation of the National Energy Strategy.

It is clearly not correct to conclude from the President's announcement on OCS leasing that the OCS oil and gas program will not play a significant role in the National Energy Strategy. First, substantial production and new reserve additions will come from areas in the OCS not addressed by the President's decision to postpone leasing in some areas. Most important to our production capacity in the near term is the Central and Western Gulf of Mexico OCS. Continued leasing, exploration and development in these areas will be an important element in the National Energy Strategy. They are particularly important in light of the recent Iraqi invasion of Kuwait because the existing infrastructure in these areas allows new production to be brought on line in a shorter period.

Second, the National Energy Strategy will address the long run energy situation. The President's OCS announcement postpones leasing in some areas while additional environmental studies are done. These studies will provide a basis for carefully considered decisions about whether, when and how to proceed with oil and gas leasing in those areas. The National Energy Strategy will reflect the possible oil and gas production which might result from such leasing. Such production could be of substantial benefit in the 2010-2040 period when energy problems may be even greater than in the 1990's. It is important to recognize that the long lead times in leasing, exploration and development mean that even if we proceeded with leasing this year in the areas postponed by the President, new production would not begin until near the turn of the century.

OCS/Clean Air Act

In conjunction with the Clean Air Act legislation which is currently in conference with the House, there has been an ongoing debate regarding the transfer of responsibility for enforcement of the Clean Air Act on outer continental shelf activities from the Department of the Interior to the Environmental Protection Agency. In addition, there are proposals to subject the OCS to state regulations, for example, California's on-shore standards. I am strongly opposed to these proposals, and assume that you are, too.

Question: If this is the case, are you intending to contact the House and Senate conferees on the Clean Air Act Amendments and relate them your concerns on this matter?

Answer: Yes, I intend to contact the conferees on the Clean Air Act and relay to them not only my opposition, but also my concerns over the transfer of responsibility for enforcement of the Clean Air Act on OCS activities from the Department to the EPA. Our concerns are shared by EPA and the Administration. The Administration has repeatedly expressed support for the provision in the Senate Clean Air Bill (section 112) and continues to support that approach.

Question: What would be the practical effect on the OCS leasing program if: (a) this transfer of authority to EPA were approved? (b) the OCS were subject to state regulation?

Answer: A transfer of Clean Air Act enforcement on the OCS to EPA would result in considerable duplication of effort in OCS inspections. Also, If the OCS were subject to State regulation, this could lead to local governments directly controlling activities conducted exclusively on Federal lands outside the jurisdiction of any State. In fact, many activities are occurring up to 150 miles offshore. The Administration opposed giving non-Federal entities control over an element of a Federal program conducted exclusively on Federal lands and has stated its position on numerous occasions. Instead, we support Section 112 of S1630, the Senate Clean air Act reauthorization amendment that addresses the OCS emissions issue.

Oil and Gas Royalties

It is my understanding that the Department of the Interior has been involved in recent discussions to amend the Federal Oil and Gas Royalty Management Act with regard to the royalty valuation guidelines. The guidelines for oil and gas royalty valuation were revised in 1988 after lengthy negotiations were conducted to ensure that all affected parties were satisfied with the agreement.

Question: Is the Department going to recommend further revision of the royalty valuation guidelines, and further amend the Federal Oil and Gas Royalty Management Act?

Answer: The Department is preparing minor revisions to its royalty valuation guidelines which are intended to clarify marginal provisions concerning: gas valuation benchmarks contained in the gas regulations; valuation of gas sales under Percent of Proceeds contracts; valuation of gas production under unitization of communitization agreements. The Department is not aware of any proposals to amend the Federal Oil and Gas Royalty Management Act.

WIPP

The Administration has submitted legislation to Congress which would provide for a legislative land withdrawal for the Waste Isolation Pilot Project in New Mexico. However, it is my understanding that Secretary Watkins also has requested that you proceed with an administrative land withdrawal for the test phase of the project.

Question: How do you intend to respond to Secretary Watkins' request?

Answer: By letter of June 13, 1990, Secretary Watkins was advised that the WIPP Final Supplement to the Environmental Impact Statement adequately assesses the impacts associated with the land withdrawal and that upon receipt of a Record of Decision, we will initiate our review of DOE's administrative withdrawal application. I also advised Secretary Watkins that I continue to believe that the permanent (legislative) approach to land withdrawal is preferable to the temporary administrative withdrawal.

Question: Can an administrative withdrawal be accomplished by January 1991 in order to accommodate the test phase of WIPP?

Answer: Yes. In the same June 13, 1990 letter, I advised Secretary Watkins that I anticipate that Interior's review of DOE's administrative land withdrawal application will take approximately 6 months to complete once the Record of Decision is received by the Department's Bureau of Land Management. The Record of Decision was received by BLM approximately June 30, 1990.

Park Service Concessions

On April 9, 1990, the Department of the Interior released its Report of the Task Force on National Park Service Concessions It is my understanding that this report was based on an April 1990 Audit Report prepared by the Department's Office of Inspector General. I am concerned that both the Inspector General's report and the Report of the Task Force do not accurately reflect the current relationship between the Park Service and park concessioners.

The Inspector General report emphasizes that the Park Service has not been receiving an adequate percentage of fees from its concessioners. For example, the report indicates that the Park Service was entitled to receive as much as $83 million more in fees between 1984 and 1988 than it actually collected.

Question: On what basis did the Inspector General make this calculation when, if my understanding is correct, the concessioners operate under mutually agreed upon contracts with the Park Service? Isn't this really just an admission by the Department that the Park Service is a poor contract negotiator?

Answer: First, The Department's Report of the Task Force on National Park Service Concessions was not based on the results of the Office of Inspector General's April 1990 audit report of concessions management. Though the Departmental Task Force report generally agreed with the recommendations made by the Office of Inspector General, the Task Force relied on its own research and analyses of Park Service's concessions management program to arrive at their conclusions and recommendations.

Second, the Office of Inspector General based its calculation of additional franchise fees on the Concessions Policy Act of 1965 (P.L. 89-249) and Park Service's Concession Management Guidelines (NPS 48) which requires that franchise fees (1) be determined on the concessioners' opportunity for net profit in relation to both gross receipts and capital invested, and (2) be reconsidered at least every 5 years. To determine the concessioners' opportunity for profit in relation to gross receipts and capital invested, the NPS Concessions

Guidelines require that industry norms, published by Dun and Bradstreet, be used in determining franchise fees. The Office of Inspector General utilized similar procedures to compute additional franchise fees by comparing average incomes before taxes, as reported by 14 concessioners on their financial statements, with Dun and Bradstreet industry median incomes from 1984 through 1988. When the concessioners' average income before taxes was higher than the industry norms, the Office of Inspector General concluded that the contract warranted a higher franchise fee be paid to the Government.

Third, in computing additional fees to the Government, the Office of Inspector General believes that no special consideration or allowance is warranted for concession contracts that contain mutual consent clauses. The Office of Inspector General believes that Park Service has the authority, under the existing contract provisions, to adjust rates and prices charged to the public when attempts to raise franchise fees to appropriate levels have not been successful. However, the Park Service did not pursue this authority. The result of not increasing franchise fees has been a factor in increasing the profits and the market value of concession operations. For example, the net income for the 14 larger contracts reviewed increased from $12.9 million to $27.9 million (116 percent increase) while gross receipts only increased from $191.6 million to $268 million (40 percent increase) from 1984 through 1988. All seven concession contracts with the mutual agreement clause included provisions that permitted Park Service to adjust rates and prices charged to the public. Accordingly, the Office of Inspector General believes that some portion of the concessioners' higher profits should have been returned to the public in the form of lower rates and prices, since the Park Service was not successful in raising franchise fees to appropriate levels.

The Park Service also did not protect its right to negotiate higher franchise fees for contracts awarded after passage of the 1965 Concessions Policies Act. Before passage of the 1965 Act, concession contracts contained a clause that generally required both parties to agree to any changes to the franchise fees. However, with passage of the Act, fees were required to be renegotiated at a minimum every 5 years. From 1965 to 1981, however, the Park Service continued to include the mutual agreement clause in new or renewed concession contracts. Of the seven concession contracts that had a mutual agreement clause, six of these contracts were awarded after enactment of the 1965 Act.

Finally, the Park Service's establishment and continued use of mutual agreement clauses until 1981 is more indicative of the absence of proper management controls to administer the concession program effectively, rather than poor contract negotiation. Overall, the Office of Inspector General believes that the negotiation of appropriate franchise fees would ensure that the Federal Government receives fair value in exchange for the privilege granted concessioners to operate in the national park system.

In the National Park Service Concessions Policy Act of 1965 (P.L. 89-249) Congress directed that "consideration of revenue to the United States shall be subordinate to the objectives of protecting and preserving the areas and of providing adequate and appropriate services for visitors at reasonable rates."

Question: Does not the Task Force report's preoccupation with increases in franchise fees and other revenue generation directly contradict the objectives of the 1965 Act?

Answer: The Task Force recognized and agreed with the law that consideration of revenue should be subordinate to the primary objectives of resource protection and providing adequate services at reasonable rates. However, the Task Force felt that even after these objectives are met, there may still be additional revenue available for a reasonable level of payment of franchise fees. This approach was taken in order to develop a pragmatic system of dealing with concessioners from a monetary standpoint, in line with the objectives stated above. Moreover, the Task Force recommended looking at the total return to the government, not just franchise fees. Some of the services provided by concessioners over the years has not been accounted for properly.

The Task Force was especially critical of the Park Service's handling and accounting for possessory interests that are derived by concessioner improvements in real property.

Question: Should this criticism of the present treatment of possessory interests be construed to mean that the concessioners should not be allowed to own possessory interests in buildings and other real property in the parks?

Answer: The Task Force did not specifically address the handling and accounting of possessory interest but did recognize the importance of possessory interest. The Inspector General report, however, did contain a criticism of the Park Service's handling and accounting of possessory interest. The Task Force recommended allowing possessory interest, but, when possible, defining possessory interest compensation to be at book value.

Question: Do you not agree that the National Park System benefits from allowing concessioners to hold possessory interests because it relieves the Federal

Government from the responsibility of maintaining many of those facilities?

Answer: We agree, in most cases, that the National Park Service benefits from allowing possessory interest.

Boise Interagency Fire Center

In little more than a year we have seen three major natural disasters in the United States. Hurricane Hugo, the earthquake in San Francisco and the *Exxon Valdez* oil spill.

Question: What interaction did the Boise Interagency Fire Center have with providing emergency assistance in the hours and days immediately following those disasters?

Answer: The Boise Interagency Fire Center provided the following materials in response to requests for equipment, supplies, and personnel in response to these three disasters:

Hurricane Hugo:
59 radio communications kits 17,383 pounds of supplies such as tools, rations, sleeping and camping equipment, etc.
20 overhead personnel Aircraft to transport 183 people

San Francisco Earthquake:
1 radio communications kit

Exxon Valdez Oil Spill:
44 radio communications kits; 1,000 pounds of supplies; 62 overhead personnel

Question: In light of the fact that the Fire Center is a storehouse of expertise and knowledge on emergency disasters, would it not be a worthy idea to investigate the possibilities for expanding the mission of the Fire Center to allow it to participate in other types of natural disasters apart from fire fighting?

Answer: The Boise Interagency Fire Center (BIFC) has considerable expertise in Incident Management activities as they relate to wildfires but no expertise in the management of emergency response actions to earthquakes, oil spills, hurricanes or other natural disasters.

BIFC is the national wildland fire support center. The primary role of BIFC is to provide support to wildland firefighting efforts across the United States, and occasionally Canada through agreement. Currently, all capability at BIFC is designed for wildland fire support, including stocking levels of communications and other equipment and supplies, and staffing levels which are designed around normal fire season occurrence. Its staffing is composed of representatives of the Bureau of Land Management, National Park Service, Fish and Wildlife Service, and the Bureau of Indian Affairs, Department of the Interior; the Forest Service, Department of Agriculture; and the National Weather Service of the National Oceanic and Atmospheric Administration, Department of Commerce.

Expanding the mission of BIFC to allow it to participate on other types of natural disasters beyond the current support provided through requests from the Federal Emergency Management Agency would require a study to determine the appropriate staffing, training, supplies, dispatching procedures, and policy changes that would be required. For example, training, equipment and policy changes would be needed for BIFC to become involved in disasters that involved structures. The Department would not object to doing such a study.

The following resources which are normally available at BIFC for wildfire suppression support would also be available (except during critical wildfire activity periods) to support major national emergency response activities:

- Communications equipment and support
- Food services
- Showering facilities
- Tools and supplies such as rations,sleeping bags, etc.
- Large and small transport aircraft
- Helicopter support
- Infrared sensing support
- Incident management personnel

If BIFC's role were expanded to support other emergency activities on a year-round basis, the support provided to the wildfire suppression program would be adversely impacted or substantial increases in funds would be required to pay for additional resources.

Wildlife Refuge Contamination

On June 12, 1990, The Department's Office of Inspector General released an audit report entitled Refuge Contaminants - U.S. Fish and Wildlife Service. The report disclosed that the Service had not developed a program to effectively identify, resolve, and monitor wildlife refuges for contaminants. Furthermore, the report recommended that the Service develop a formal Servicewide contaminant identification and resolution program.

In FY 1987, Congress provided initial funding for development of a program to monitor and resolve

contaminant issues on refuges, and also provided funding in excess of $4 million annually in subsequent years.

In April of 1987 an interagency agreement was signed with the Idaho National Engineering Laboratory to develop plans and procedures to set standards for Service contamination monitoring efforts. Although Service officials informed Congress in 1989 that the laboratory's monitoring plan would be field-tested in March 1990, Service officials informed Congress in late 1989 that the products were unsatisfactory and would not fulfill the goals stated in the agreement.

Question: What activities does the Service intend to pursue in FY 1991 in order to resolve this contamination issue?

Answer: Since FY 1987, the Service, with the support of Congress, has expended considerable effort identifying, assessing, and resolving contaminant issues on many National Wildlife Refuges across the Nation. The Service has also aggressively moved to bring our underground storage tanks into compliance with both the letter and spirit of the regulations. We are on the threshold of completing the development of a database that will aid the service in systematically tracking our contaminant program. This database will also be useful in planning for future needs. The Service is in the process of developing a long-range plan for the environmental contaminants program. These programs will continue to be conducted in FY 1991.

In April 1987, the Service signed an interagency agreement with the Idaho National Engineering Laboratory (INEL). The INEL agreement has two primary components. The first is development of a "decision tree" for identifying and assessing site specific contaminant issues, and the development of standardized techniques for use on Service lands, mainly National Wildlife Refuges. The second component involves the development of recommendations for monitoring environmental contaminants relative to fish and wildlife resources on a regional and national scale.

As of late 1989, the first component was not completed to the satisfaction of the Service, therefore the scheduled March 1990 field test was delayed. The Service has worked very closely with the INEL on this component, and to develop a contaminant monitoring program for all Service trust resources, including National Wildlife Refuges. A team of Service and INEL scientists have developed a draft document to guide monitoring decisions on Service lands. This document was field tested in May 1990 at the Laguna Atascosa National Wildlife Refuge in Texas.

The second component of the INEL agreement is also progressing. A draft summary report of Federal contaminant monitoring programs, with recommendations for an overall Service monitoring program, was prepared by INEL in February 1990. A final report is due in August 1990. Additionally, in January 1990 the Service established an internal Biomonitoring Workgroup to expand the existing National Contaminant Biomonitoring Program into an ecosystem oriented program that addresses all Service interests regarding environmental contaminants and potential impacts to trust resources. INEL participated in the Workgroup discussions.

The next steps in implementation of the monitoring program, which could start as early as 1991 include the following: 1) complete a detailed monitoring plan for Service lands and other trust resources based on the recommendations of the Workgroup and INEL's report; 2) field test the decision document developed by INEL on a subset (5-10 percent) of Service refuges to ensure that the document will address the wide range of geographic and contaminant-related issues on the Service's 460 refuges; and 3) field test bioassessment methods that have been developed by the Service to ensure their applicability to a long-term monitoring effort.

Question: When will an adequate monitoring system be established?

Answer: The Service is developing a revised and expanded monitoring program. Refuge monitoring is a major component of this program. We plan to develop the program, field test promising methods, initiate a pilot program and have the program reviewed by an appropriate group. Assuming that sufficient resources are available, a program could come on line in 1992 with a full program in operation by FY 1995.

Question: What level of funding did the Administration's FY 1991 budget request contain for this program? Is this a sufficient amount?

Answer: The 1991 President's budget includes $659 thousand for the contaminants monitoring and surveillance program. The Service has not requested additional funding for contaminant monitoring for INEL. Products have only recently reached a level of completion sufficient to allow us to look forward to using them. The Service could continue working with INEL in FY 1991 to complete the development and testing of the refuge contaminant monitoring program and the development of a national monitoring plan. The Service believes that monitoring, in a coordinated effort with other Federal monitoring efforts, is necessary to provide the information we need to protect our trust resources. An additional $1.9 million is necessary to develop a detailed monitoring program; field test the decision document about on 5 percent of our refuges; and field test bioassessment methods that have been developed.

Question: Does the Service intend to continue its agreement with the Idaho National Engineering Laboratory?

Answer: Yes. The Service intends to continue working with INEL on the completion of a decision document for Service lands and the development of a national plan. The Service and INEL have a cooperative relationship and an integrated team approach for working on the relevant projects.

Spotted Owl

On June 22, 1990, the U.S. Fish and Wildlife Service listed the northern spotted owl as a threatened species in portions of Washington, Oregon, northern California, and British Columbia. Unlike the Forest Service, which continues to maintain that its hands are tied by the now infamous Jack Ward Thomas report, BLM director Cy Jamison directed his staff to devise an alternative to the Thomas report which provides for a higher timber sale level and protects more spotted owls than Thomas. Mr. Secretary, I want to congratulate you and Mr. Jamison for this creative action which may save the jobs of hundreds of timber workers in the state of Oregon.

On June 26, 1990, the Administration announced a five-point plan for dealing with the listing decision. The first of these five points is for the BLM to implement the BLM alternative - the so-called "Jamison Strategy."

Question: Is the "Jamison Strategy" based on the Jack Ward Thomas report?

Answer: Through FY 1992, the Jamison Strategy reflects the major components of the Thomas Report recommendations by protecting all of the Habitat Conservation Areas (HCAs).

Question: How does it differ from the Thomas report?

Answer: One component of the Thomas Report - the "50-11-40" recommendation - is included in the "Jamison Strategy" only where its implementation would be consistent with the objectives of the timber sale. The "Jamison Strategy" provides short-run protection for 55 Oregon Department of Fish and Wildlife (ODFW) agreement areas and areas protected by Section 318 of the 1990 Department of the Interior Appropriation Act that lie outside Habitat Conservation Areas (HCAs).

Question: How many jobs will it save compared to Thomas?

Answer: The proposed timber sale levels in the "Jamison Strategy" will save an average of 1,250 jobs compared to the Thomas Report, over the next 2 years. This is not, however, a long-term comparison, as the specified timber sale levels of the "Jamison Strategy" do not extend beyond FY 1992.

Question: How many owls will it save compared to Thomas?

Answer: The Thomas Report projects decline in owls on BLM-managed lands over the next few decades, followed by a long-term increase above current levels. The "Jamison Strategy" expects to sustain near current levels over the next 2 years, but is only a short-term strategy, so no long-term comparisons would have meaning.

Question: Has the "Jamison Strategy" been studied by or approved by Jack Ward Thomas or any other wildlife biologists?

Answer: The Jamison Strategy is a management strategy, developed considering both science and economic impacts. Mr. Thomas has been briefed on it as have BLM biologists at the district, state office and Headquarters office levels. It would not be appropriate for the bureau to seek his approval since Mr. Thomas has no management review authority over Department policies or programs.

Question: Has the U.S. Fish and Wildlife Service approved the "Jamison Strategy?"

Answer: The Jamison strategy is the basis for BLM's 1991 timber sale planning. The strategy itself is not something that requires review by the Fish and Wildlife Service. However, the 1991 sale plan, which is based on the Jamison strategy, is subject to consultation under Section 7 of the Endangered Species Act. The Fish and Wildlife Service will provide its biological opinion on the 1991 sale plan to the BLM.

Question: Can the "Jamison Strategy" be implemented administratively, or will it require legislation?

Answer: The Jamison Strategy is designed to be implemented administratively, within existing authority to manage the Oregon and California Railroad Grant lands administered by the Bureau of Land Management in Western Oregon. One element of the strategy, protection from non-sale specific law suits, is a part of section 318 of the Department's 1990 Appropriations Act. Section 318 expires on

September 30, 1990, and thus, in part for this purpose, would need to be extended beyond 1990.

On May 23, 1990, the Senate Public Lands Subcommittee held a hearing on the Jack Ward Thomas report. If my recollection is correct, John Turner, director of U.S. Fish and Wildlife, testified that he believed that a viable timber program could continue in Oregon, Washington and northern California if the spotted owl were listed as a threatened species.

Question: Do you know if that is still Mr. Turner's opinion?

Answer: Yes, it is. The FWS is reviewing the timber sale programs (pre-section 318 and section 318) of the Forest Service and Bureau of Land Management through the Section 7 consultation process. As agreed with these agencies, the Service intends to conclude the reviews of these sale programs within 30 days of receipt of the information necessary to complete consultation and as close to the effective date of listing as possible. The Service is on schedule with these reviews. In addition, the Service has initiated discussions with the States and private industry to assist them in understanding the compliance requirements of the ESA. The Service believes that through these reviews and discussions adequate protection for the owl can be maintained that is commensurate with a viable timber program on all lands.

Question: Mr. Secretary, are you confident that a viable timber program can be maintained in the affected areas?

Answer: Some timber sale level will be sustained in the long run. In FYs 1991 and 1992, in Oregon, we expect BLM to sell about 750 MMBF annually. The level of offering in California is estimated to be approximately 6 MMBF as compared to their average allowable sale quantity of 12.5 MMBF. The volume of timber that BLM administers in California has relatively minor effect on the regional economy as compared to the FS. BLM is not involved in timber sales in the State of Washington.

Question: What is the likelihood that the Federal District Courts will enjoin the BLM from offering timber for sale on the basis that BLM did not adopt the Jack Ward Thomas plan in total?

Answer: The Jack Ward Thomas Report is a biological analysis related to the long term protection of the northern spotted owl. It is a technical analysis with recommendations. It is not a decision nor does it carry with it any legal authority as it may apply to the BLM, other than that the BLM must consider it in the development of its resource management plans. We are not prepared to speculate on how the courts will view the Thomas plan in any litigation that may arise.

Question: **It is my understanding that there has been considerable confusion regarding the impact of the listing decision on private timber lands. Could you please clarify for the Subcommittee once and for all how the decision affects private land?**

Answer: Section 9 of the ESA prohibits the taking of any listed species on all land ownerships, private, State, and Federal The 1982 amendments to the ESA gave the Service a procedure to authorize the incidental take of a listed species on non-Federal lands through a permitting process. This process requires that the land owner who has owls or owl habitat on his lands to develop a habitat conservation plan (HCP) as part of the permitting process. The Service believes that the most efficient and expedient method to handle this issue is through the State Forestry Departments. In light of that, the Service has already initiated discussions in all three States to initiate the HCP process. In addition, the Service has recently published incidental take guidelines that are intended to clarify the circumstances under which a private land owner may need to be concerned over whether an owl or owl habitat is found on his lands. These guidelines also describe the methods to avoid that take situation, thus avoiding any violation of the ESA.

Question: **In accordance with section 6 of the Endangered Species Act, what additional burdens does the listing decision place on the states?**

Answer: Section 9 of the Act, which prohibits taking of any listed species, also applies to the States as it does to private land owners (a full discussion is provided in the answer to the previous question). Section 6 of the Act provides the States the opportunity to obtain grants-in-aid to assist in their conservation activities for Federally-listed species. Upon the owl's being listed, the States may submit requests to the Service for grants to support conservation work with the species. However, these funds are limited, and the Service will need to review and set priorities for these requests before allocating available funding for deserving projects.

Question: **Does the Fish and Wildlife Service's FY 1991 budget request include any funds to help the states meet the section 6 requirements?**

Answer: Section 6 of the Act does not place requirements on the States subsequent to the listing of the owl, but provides the States an opportunity to obtain grants to assist in their conservation activities. The Service will certainly consider State-originated projects dealing with the owl for possible Section 6 funding in fiscal year 91. The FY 91 President's budget request included $5.75 million for section 6 grants.

The third element in the Administration's five-point spotted owl plan is to convene a higher level interagency task force, chaired by the Secretary of Agriculture, to begin work immediately on devising a forest management plan for the Forest Service for FY 1991. The task force will work in close consultation with key members of Congress from the committees with jurisdiction over forestry and endangered species issues and from the affected states, as well as the governors to those states.

Question: Has the task force been established?

Answer: Yes, it has been established.

Question: Who besides the Secretary of Agriculture will serve on the task force?

Answer: The members of the task force are the Secretary of Agriculture (chair), the Secretary of Interior, the Administrator of the Environmental Protection Agency, The Chairman of the Council of Economic Advisors, the Director of the Office of Management and Budget, and the Assistant to the President for Policy Development. In addition, the Director of the Bureau of Land Management, the Director of the Fish and Wildlife Service, and the Chief of the Forest Service serve as *ex officio* members of the task force.

Question: Have letters of invitation been sent to the governors of the states asking for their participation?

Answer: No. In July a working group for the Task Force completed a trip to Oregon, Washington, and California. During that trip the working group met with the Governors of Oregon and Washington and with a representative of the Governor of California. Further consultation is expected between the Task Force and the Governors.

Question: Will the task force attempt to devise a management plan that conforms to the constraints of the Endangered Species Act and other environmental laws, or will it draft a plan that will need to be legislated?

Answer: At this point the task force has only begun its investigations and deliberations It is too early to tell whether the recommendations of the task force will require legislation action of some sort.

Question: Do you believe that a plan can be produced by September 1?

Answer: The task force has been charged with producing a report by September 1 and plans to meet that deadline.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Scientific Basis for Bureau of Land Management Short-Term Approach

Mr. Lujan, your goals of preserving owls and reducing associated economic dislocation are laudable and shared by all, but your specific proposal for BLM raises troubling questions.

Question: What is the scientific basis on the BLM plans for 1991 and 1992 to ensure protection for the owl, and what evidence suggests that harvest plans will in fact proceed and be successful in reducing economic dislocation?

Answer: The BLM believes that the Jamison strategy, on the short term (1991 and 1992), will provide adequate protection in that it will provide protection for 450 pairs of spotted owls. In addition to the HCAs, the BLM plans to continue to protect 55 Spotted Owl Management Areas (SOHA) that exist outside of the HCAs. These SOHAs will be protected in addition to those "50-11-40" rule areas that are feasible to protect and still be consistent with timber sale objectives. BLM program managers assisted the Director in the development of his strategy. BLM biologists have been briefed.

The BLM will fully comply with the Endangered Species Act. They are confident that they will be able to take measures that will prevent or resolve any potential conflicts that could arise during the consultation process, without serious disruption to the planned sales for 1991 or 1992.

Question: Protecting the owl occurs through protecting the habitat. What is the basis for assuming that BLM actions will have no adverse effect on habitat when you are not following the Interagency Spotted Owl Committee Report which is the most credible source of information to date?

Answer: BLM is not claiming that its actions would have no adverse effect on habitat. Even the authors of the Interagency, Scientific Committee (ISC) Report say their recommendations would have adverse effects on habitat over the next few decades. The thrust of the BLM strategy is to preserve major options for consideration in its current resource management planning efforts while still providing for a high level of protection for the spotted owl while minimizing the adverse economic impacts to the communities.

Judicial Review

I also noticed that two of the three legislative initiatives proposed by the Administration are requests for limiting Judicial Review.

Question: If you are making sound decisions based on good science, why are you afraid to have these decisions reviewed by an impartial judge?

Answer: Recent history and experience with litigation has demonstrated that "good science" does not necessarily preclude advocates on either side of an issue from attempting to bring litigation. This creates uncertainty regarding timber sale availability, causes substantial delays and requires significant additional staff time. If litigation can be avoided, the programs certainly benefit from it.

Lake Champlain Special Designation Act

Finally, I want to let you know of my efforts to increase Federal involvement in Pollution research, monitoring, and mitigation of Lake Champlain through the "Lake Champlain Special Designation Act." The Act was passed out of the Environment Committee on June 12th as part of the "Coastal Protection Act". These efforts will involve a number of your agencies such as the United States Geological Survey, and Fish and Wildlife Service. I want to urge the Fish and Wildlife Service to establish an Ecological Service Office within the Lake Champlain Basin in the early 1990s. I would appreciate your sending me a capability statement on this prospect as soon as possible.

Response: A capability statement for establishing a Lake Champlain Ecological Services field office has been sent to you separately. Its contents follow:

DEPARTMENT OF THE INTERIOR

Agency/Bureau : U.S. Fish and Wildlife Service
Fiscal Year : 1991
Appropriation : Resource Management
Activity/Subactivity : Fish and Wildlife Enhancement/Ecological Services
Proposed Amendment : Establish Field Office in Vermont

Current Program: The Service conducts investigations and provides technical assistance on land and water development activities affecting fish and wildlife resources in Vermont and Lake Champlain from a field office located in Concord, New Hampshire. This Ecological Services office works cooperatively with State and local government agencies, as well as Federal agencies such as the Environmental Protection Agency and Corps of Engineers on issues involving water quality, environmental contamination, wetlands protection and restoration, hydroelectric projects, and endangered species.

Amount Budgeted: FY 1990: $904,500
FY 1991: $598,000

(for New England Field Office covering six New England states; approximately $30,000 for activities in Vermont)

Feasibility: The President's 1991 Budget proposes significant increases in a number of programs within the Department of the Interior, while supporting efforts to reduce the Federal deficit in accordance with Gramm-Rudman-Hollings targets. Any increases above the President's Budget request will need to be offset by corresponding reductions in other projects or programs so that deficit reduction targets can be met. The highest priority work involving fish and wildlife matters in Vermont can be accomplished with funds made available through the President's Budget. However, if the Service were to open a satellite office on Lake Champlain in or near Burlington, Vermont an increase of $250,000 and 4 FTE 's would be needed. The proposed increase would allow the Service to respond more directly to resource issues in Vermont, including the proposed Lake Champlain initiative.

The proposed funds would be utilized to support one supervisory biologist staff, and administrative costs to conduct environmental containment surveys and work on Lake Champlain issues, and to address wetlands, endangered species, and hydropower matters. Approximately $110,000 of the proposed funds would be used for office/field equipment and operational costs ($50,000), annual travel expenses ($10,000), and moving costs ($50,000) to obtain two experienced biologists the first year of operation and to conduct field surveys thereafter.

Capability: The Service would be capable of using these funds.

Outlay effects: FY 91 - $250,000

Proposed By: Senator Patrick Leahy

QUESTIONS SUBMITTED BY SENATOR DALE BUMPERS

Mr. Secretary, I understand that the Bureau of land Management has decided to develop an alternative management plan for the spotted owl rather than implementing the plan developed over the past year by the Interagency Scientific Committee chaired by Jack Ward Thomas.

Question: Does the BLM's alternative plan exist on paper? Can the Subcommittee obtain a copy for review?

Answer: Yes, the copy of the plan is attached.

NORTHERN SPOTTED OWL: THE JAMISON PLAN DETAILED MANAGEMENT STRATEGY

On April 4, 1990, the Interagency Spotted Owl Scientific Committee (ISC) released its report titled "A Conservation Strategy for the Northern Spotted Owl." This report proposed a conservation strategy for the owl that recommended the land managing agencies eliminate timber harvest in tracts of forest lands called habitat conservation areas (HCA). The conservation strategy proposed four categories of HCAs: (1) blocks capable of supporting at least 20 pairs of owls; (2) blocks that could support 2 to 19 pairs; (3) site-specific blocks (one and one-half mile radius circles) for existing and newly discovered owl sites in the north coast area of the state; and (4) site-specific blocks (one-fourth mile radius circles) to support individual owl activity centers known to exist between 1985 and 1989; and in addition, the ISC report recommended the "50-11-40 rule" which is intended to maintain forest stands that provide dispersal linkages for adult and juvenile owls between the HCAs.

The Oregon State Office and western Oregon districts of BLM have analyzed the potential impacts of fully adopting the report's recommendations. It is estimated that the annual sale of timber from BLM forested land in western Oregon would be reduced approximately 60 percent from the current allowable sale quantity. BLM also estimates that 7,000-8,000 total jobs would be lost in western Oregon, and that western Oregon counties would lose $85.2 million annually, or over 50 percent of the current revenue from BLM administered timber sales. Of the total 2.1 million acres of commercial forest land in western Oregon, 1.6 million is classified as "available" for intensive forest management including commercial harvest activities. If the ISC report were to be fully implemented, it is estimated that an additional 611,000 acres would be removed from this available commercial forest base.

Guidance to BLM from Congress on the use of the ISC's work is in the 1990 Appropriations Act for Department of the Interior and Related Agencies Conference Report. This report states: "The managers further expect that the BLM will consider carefully any recommendations made by the Interagency Scientific Committee in the development of its new land and resource management plans".

BLM Director Cy Jamison has cited the ISC Report as a benchmark for the development of a management plan, but has emphasized BLM's requirement under the Federal Land Policy and Management Act and the National Environmental Policy Act (NEPA) to analyze other alternatives during the preparation of Resource Management Plans (RMPs). The RMPs for the western Oregon districts are being prepared with extensive public involvement. They are scheduled for completion so as to permit implementation in October of 1992 (FY 1993). During FY 1991 and FY 1992, an "interim strategy" will be carried out by BLM that will provide a sale offering of approximately 750 million board feet each year. This strategy is designed to minimize economic impacts, protect northern spotted owls, and still provide for a maximum number of management options for consideration in the development of the new RMPs. BLM's strategy is to not locate timber sales within the 4 categories of HCAs as recommended in the ISC Report or in the 110 Spotted Owl Management Areas (SOMA's) as agreed to with the Oregon Department of Fish and Wildlife and the additional 12 sites identified under Section 318 of Public Law 101-121. The "50-11-40 rule" will not be automatically applied, but will be considered where possible.

Jamison stressed that timber sale planning would comply with the requirements of the Endangered Species Act. BLM will consult with the Fish and Wildlife Service on all proposed activities that BLM finds may affect the spotted owl or its habitat.

These FY 1991 and 1992 sales will impact less than 30,000 acres of mature and old growth forest, leaving over 800,000 acres of mature and old growth forest remaining at the end of the interim (1991-1992) period.

PHASE I - FISCAL YEAR 1990

Objectives:

- Continue the flow of sold timber into the market with minimum disruption
- Complete the FY 90 timber sales program after consultation with U.S. Fish and Wildlife Service (FWS)

Actions:

The total volume offered as required by the 1990 Appropriations Act is 1.9 billion board feet for FY 89 and FY90.

Listing of the northern spotted owl will require consultation with the FWS. On those prior sales for which the contract has been awarded, consultation will be limited to those that are known to have spotted owls within the contract area.

(Note: The Interagency Scientific Committee (ISC) considered timber currently under contract as being already harvested and not available for the northern spotted owl habitat.)

PHASE II - FISCAL YEAR 91 - FISCAL YEAR 92

Objectives:

- Protect/manage the northern spotted owl
- Maintain reasonable flow of timber supply
- Accelerate research/studies on active owl management
- Maintain fire/resource protection
- Fully implement the Western Oregon Anadromous Fish Plan
- Implement the Oregon Fish and Wildlife 2000 and Recreation 2000 plans
- Complete the RMP/EISs currently under way for all western Oregon

Guidelines:

To accomplish these objectives, the following guidelines would be utilized in developing FY91-92 timber sale plans:

1. No regular green timber sales will be offered within the 110 spotted owl habitat sites established under the 1987 agreement between BLM and ODFW, and the additional 12 sites identified under Section 318 of Public Law 101-121. Any sale of salvage material would require concurrence of the Oregon Department of Fish and Wildlife.

2. No design of regular green timber sales in proposed HCA, Categories 1, 2, 3 and 4 of the ISC Report. HCA Categories 1 and 2 have boundaries mapped in the report. Categories 3 and 4 have been preliminarily mapped based on currently known owl sites. Category 3 criteria also call for protecting future pairs. Follow the BLM guidelines for surveying timber sales for

spotted owls by verifying the presence or absence of new owl sites within the areas subject to Category 3 criteria. Salvage sales could be offered in HCAs if the action is deemed by BLM to have little impact on the spotted owl populations or critical habitat.

3. The ISC report's "50-11-40 rule" will not be applied automatically in developing timber sale plans, but will be considered where possible. Fifty-six out of the 122 spotted owl habitat sites are located outside the HCAs; they do provide part of the connectivity and linkages for dispersal of spotted owls between HCAs as intended by the "50-11-40 rule."

These guidelines have been incorporated into an instruction memo to BLM's western Oregon districts regarding FY 1991 timber sale plans.

Actions:

o Habitat for up to 450 pairs of spotted owls would be available during the planning process.

o 1.5 billion board feet would be offered during these two fiscal years based on 750-800 million board feet per year for a reliable supply of timber.

o Over 400,000 acres of old-growth stands will be available during the planning process. An additional 400,000+ acres of mature stands, considered to be suitable owl habitat, will also be available.

o As part of an interagency effort to study the northern spotted owl, BLM would undertake the following efforts, including establishing a BLM research unit on the campus at Oregon State University, or other qualified institutions:

1. Active research/study dealing with:

    a. Habitat
    b. Prey population
    c. Dispersal/Physiology/Behavior
    d. Demographics

2. Active silvicultural study on practices/methods for harvest/reforestation/vegetation management.

3. Vegetation/biological diversity.

o Complete western Oregon Resource Management Plans (RMPs) and associated Environmental Impact Statements (EISs) prior to October 1992, with extensive public involvement during the major stages of RMP development, including:

    o Identification of issues and concerns
    o Identification of management opportunities
    o Formulation of plan alternatives
    o Draft RMP/EIS (four months allowed for comment)
    o Proposed RMP/Final EIS

The RMPs initiated in 1986 will address the following issues developed through the public scoping process;

- Timber production practices
- Old-growth forests and habitat diversity
- Threatened and endangered (and other special status) species
- Special areas
- Visual resources
- Stream/riparian/water quality

- Recreation resources
- Wild and scenic rivers
- Land tenure
- Rural interface area management

The RMPs' preferred alternatives will be selected after analysis of five commonly formulated alternatives with goals as follows:

Alternative A - Emphasize high production of timber and other economically important values to contribute to community stability.

Alternative B - Emphasize timber production to contribute to community stability consistent with the variety of other land uses such as fish and wildlife habitat, recreation, and scenic resources.

Alternative C - Provide timber production to contribute to community stability consistent with maintenance of biological diversity and the variety of other uses such as fish and wildlife habitat, recreation, and scenic resources.

Alternative D - Emphasize protection and reestablishment of spotted owl habitat, along with management and enhancement of other values such as dispersed nonmotorized recreation opportunities and scenic resources. This will incorporate ISC report recommendations.

Alternative E - Emphasize protection of older forests and management and enhancement of values such as dispersed nonmotorized recreation and scenic resources.

Criteria for these proposed alternatives are described in a mailer sent to interested parties for comment on June 15, 1990. Public comment on them is due by July 20, 1990, and will be factored into the final array of alternatives.

PHASE III - MID FISCAL YEAR 1992/1993

Objectives:

- Complete Records of Decision (RODs) necessary for implementation of western Oregon Resource Management Plans (RMPs).

- The BLM Director will address any protests on a proposed RMP before a ROD issues.

- Provide a smooth transition into the decision implementation phase, including decadal timber management plans.

- Continue management consistent with previous years' 750-800 million board feet but adjusted after ROD issuance to move toward the level established in the ROD.

- Maintain, in the interim, over 800,000 acres of mature and old-growth timber stands until the ROD is finalized; afterward protect older forest stands as directed by the ROD.

PHASE IV - FISCAL YEAR 1994 AND BEYOND

Objectives:

- Continue implementation of Resource Management Plans selected in RODs issued during Phase III. Assuming selection of an alternative in each RMP that might blend features of the mid-range alternatives described above or closely follow one of those mid-range alternatives, one could expect the following RMP features:

  - o A sustained annual timber sale quantity reflective of resource tradeoffs and capability.

  - o Maintenance of genetic diversity of forest stands to assist in the ecologic diversity for a variety of plant and animal species, including the northern spotted owl, that inhabit western Oregon forests.

  - o Assurance of effective genetic interchange, naturally and/or artificially, between owls, as well as other sensitive species, on or near BLM-managed lands.

Question: How was this alternative approach developed? What was the involvement of BLM scientists with expertise in population biology of the Northern Spotted Owl? What were their recommendations with regard to deviating from the Interagency Scientific Committee recommendations?

Answer: The BLM's alternative is an interim 2-year management strategy, developed considering both science and economic impacts. BLM biologists were briefed on the strategy.

Question: Can you provide us with the names of the scientists involved in reviewing or contributing to the plan?

Answer: There were none directly involved, however, BLM program managers have assisted the BLM director in preparing the strategy, and BLM biologists at the district office, state office and Headquarters Office have been briefed on the strategy.

Question: What is your schedule for having the BLM alternative peer reviewed?

Answer: No formal "peer review" is planned. It is a management strategy based on program managers' input and the available documents on the subject. It is not a "scientific" or "research" report.

Question: Has the Interagency Scientific Committee had the opportunity to review your recommendations?

Answer: Not explicitly, however, Jack Ward Thomas has been briefed.

Question: Have you and Cy Jamison invited Jack Ward Thomas or any member of his team to sit down with you and discuss your proposal?

Answer: The BLM Oregon State Director, Dean Bibles, briefed Mr. Thomas.

The Interagency Scientific Committee Report stressed the importance of providing a coordinated conservation strategy for the spotted owl for the entire geographic area covering its habitat.

Question: How will the BLM plan be coordinated with other federal land in the area?

Answer: Such coordination will be accomplished in relation to long-term decisions. We expect it to be specifically addressed in both the Fish and Wildlife Service's recovery plan for the northern Spotted Owl and BLM's western Oregon resource management plans now under development and scheduled for completion by the end of FY 1992.

Question: Can you explain how the BLM plan comports with the so-called "50-11-40" rule found in the Interagency Scientific Committee recommendations?

Answer: The so-called "50-11-40" rule will be followed where that option is available in the checkerboard land pattern of the O&C lands and, where its implementation would be consistent with the objectives of the timber sales. The purpose of the "50-11-40" rule is to maintain linkage between HCAs. Under the BLM plan, this linkage will be provided by 55 Oregon Department of Fish and Wildlife agreement areas and areas protected by Sec. 318 of the 1990 Department of the Interior Appropriation Act that lie outside HCAs.

I understand that BLM district managers have received written instructions that they are not obligated to follow this rule.

Question: How will these managers decide when to follow the rule?

Answer: Managers will follow the "50-11-40" recommendation of the ISC to the extent that they can offer the target volume of timber for sale from those areas on the O&C lands where the recommendation could be applied without precluding such offerings.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Ogallala Aquifier

Mr. Secretary, I would like to bring to your attention a problem with broad impact throughout the High Plains States. This involves the depletion of the Ogallala Aquifer, which underlies eight states in the High Plains. Public Law 99-662 created a new Title 3 within the Water Resources Research Act, a title authorizing the U.S. Geological Survey to undertake --- in cooperation with the states and with non-Federal cost sharing --- an important research and demonstration program to reclaim this critical water resource.

On June 6th, the 16 Senators representing the High Plains States sent a letter to Chairman Byrd urging that this Subcommittee approve money to enable the States to begin this effort. Accompanying that letter was a copy of a letter sent to Chairman Byrd from the Governors of the eight states, a letter in which the Governors expressed their united support for the Ogallala Aquifer recovery effort.

Mr. Chairman, I ask permission to include in our hearing record copies of both letters.

(The letters follow)

June 6, 1990

The Honorable Robert C. Byrd
Chairman
Subcommittee on Interior
Committee on Appropriations
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Section 1121 of Public Law 99-662 established within the Water Resources Research Act an important program to assist the states of the High Plains Region reclaim a critical water resource.

The eight High Plains states that we represent overlie a geological formation known as the Ogallala Aquifer. Section 1121 created, through the U.S. Geological Survey, a program to assist the High Plains states undertake a coordinated effort, to reverse the decline of the Ogallala Aquifer, and begin to reclaim this vital resource.

In a letter to you, dated February, 5, 1990, the Governors of the eight states expressed their strong support for the Ogallala Aquifer recovery effort. A copy of that letter is attached. The Governors are anxious to move forward on this program, which requires a 25 percent non-Federal match on the cooperative aspects of the work.

The Governors, in part, write of the "importance of the Ogallala to our respective states," then point out the "significant economic benefits [that] such a research and demonstration program would have to the region and the nation..."

We agree.

According to the Department of the Interior: "About 20 percent of the irrigated land in the United States is in the High Plains region, and about 30 percent of the ground water used for irrigation in the United States is pumped from the Ogallala."

While the full Ogallala program is authorized at $13 million annually, we recognize that such a large sum, while justified in our view, is unrealistic at this time.

But we are convinced that meaningful work can be accomplished during fiscal year 1991, if the Federal Government can initiate assistance soon, in preparation for legislation that would extend the program [S. 1635, introduced by Senators Chafee and Domenici].

The Ogallala program contains a number of components, Mr. Chairman, and we urge that your Subcommittee approve the following sums for fiscal year 1991:

* Support for the High Plains Council [Section 302 of the Water Resources Research Act, as amended]: $300,000;

- Research grants in water-use efficiencies, etc., [Section 303]: $3,330,000;
- Research grants for saline water uses, etc. [Section 304]: $1,900,000; and
- Demonstration projects [Section 305]: $2,760,000.

Mr. Chairman, you will note that the full request for Sections 303, 304, and 305 adds up to $8 million --- $1 million for each of the High Plains States. We believe this is a modest, yet meaningful, request.

Some of our states have indicated greater interest in the research components of the Act, while others feel confident of moving into the demonstration phase. We, therefore, would also request that your Subcommittee provide some flexibility in allocating the funds among the states, with the goal of providing $1 million per state. This money, of course, will be matched under the formulas in the Act.

We appreciate greatly your consideration of this important request.

With warmest personal regards,

Bob Kerrey
J. Robert Kerrey

Pete V. Domenici
Pete V. Domenici

Alan Simpson

Malcolm Wallop
Malcolm Wallop

Bob Dole
Robert Dole

Nancy Landon Kassebaum
Nancy Landon Kassebaum

Jim Exon
J. James Exon

Lloyd Bentsen
Lloyd Bentsen

Timothy E. Wirth
Timothy E. Wirth

Tom Daschle
Thomas A. Daschle

David L. Boren

Don Nickles
Don Nickles

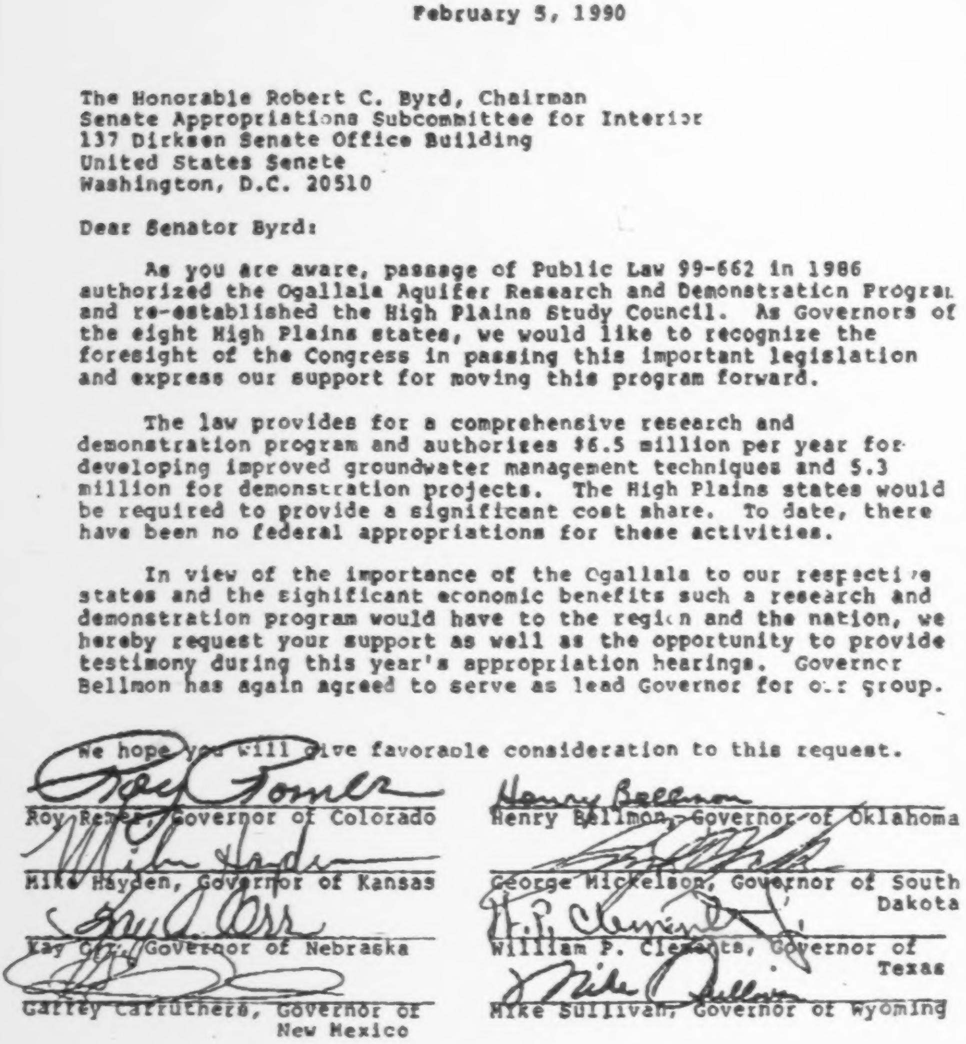
Bill Armstrong
William L. Armstrong

Larry Pressler
Larry Pressler

Phil Gramm
Phil Gramm

Jeff Bingaman

LETTER FROM THE OKLAHOMA WATER RESOURCES BOARD



February 5, 1990

The Honorable Robert C. Byrd, Chairman
Senate Appropriations Subcommittee for Interior
137 Dirksen Senate Office Building
United States Senate
Washington, D.C. 20510

Dear Senator Byrd:

As you are aware, passage of Public Law 99-662 in 1986 authorized the Ogallala Aquifer Research and Demonstration Program and re-established the High Plains Study Council. As Governors of the eight High Plains states, we would like to recognize the foresight of the Congress in passing this important legislation and express our support for moving this program forward.

The law provides for a comprehensive research and demonstration program and authorizes $6.5 million per year for developing improved groundwater management techniques and $.3 million for demonstration projects. The High Plains states would be required to provide a significant cost share. To date, there have been no federal appropriations for these activities.

In view of the importance of the Ogallala to our respective states and the significant economic benefits such a research and demonstration program would have to the region and the nation, we hereby request your support as well as the opportunity to provide testimony during this year's appropriation hearings. Governor Bellmon has again agreed to serve as lead Governor for our group.

We hope you will give favorable consideration to this request.

Roy Romer — Henry Bellmon

Roy Romer, Governor of Colorado — Henry Bellmon, Governor of Oklahoma

Mike Hayden

Mike Hayden, Governor of Kansas — George Mickelson, Governor of South Dakota

Kay A. Orr — W. P. Clements

Kay Orr, Governor of Nebraska — William P. Clements, Governor of Texas

Mike Sullivan

Garrey Carruthers, Governor of New Mexico — Mike Sullivan, Governor of Wyoming

The 16 Senators and the 8 Governors are convinced that meaningful work can and should be accomplished during fiscal year 1991. This particularly important as it appears the Congress will soon extend the entire Ogallala program; Section 105 (o) of S. 203, now on the Senate Calendar, extends the Ogallala effort through 1994.

Question: Mr. Secretary, would you agree with me that depletion of the Ogallala poses a serious problem to the natural and economic welfare of the High Plains States, and that the current law creating a cost-sharing program of research and demonstrations offers an important opportunity to reverse this decline?

Answer: Depletion of the aquifer would affect the welfare of portions of the High Plains States and the Nation, just as other aquifer depletion and contamination problems across the Nation would affect local, regional, and national welfare. Problems with the Ogallala Aquifer must be placed in perspective relative to water resource problems nationwide.

The Ogallala Aquifer is not being uniformly depleted. From 1980 to 1988, the area-weighted average water-level change for the aquifer was a rise of 0.8 feet. During that period, there were continuing water-level declines of more than 10 feet in southwestern Kansas, parts of the Panhandles of Oklahoma and Texas, and the northern part of the southern High Plains in Texas. Because the aquifer is not being uniformly depleted, the effects of the depletion on the welfare of the affected communities will not be the same throughout the region.

I do not favor more generous Federal support for research on aquifer depletion problems occurring in some areas of the High Plains States than for research on similar problems occurring in other areas of the Nation. Up to 75 percent of the cost of research projects and 85 percent of the cost of farmer demonstration projects would be supported by Federal funds under Title III of the Water Resources Research Act of 1984. This is a much more generous cost-sharing arrangement than the $1 Federal to $1 non-Federal match required for research grants under Section 105 of the Act and the $1 Federal to $2 non-Federal match required for grants supporting the Water Resources Research Institutes under section 104 of the Act. Sections 104 and 105 of the Water Resources Research Act provide a mechanism, at a lower Federal cost, for supporting water resources research on Ogallala Aquifer depletion problems and other water resource problems nationwide. In addition, the Federal-State Cooperative Program, which requires that each Federal dollar be matched by non-Federal funds, offers many opportunities for research to be conducted jointly with State and local interests. The Cooperative Program already produces an annual report on water levels in the Ogallala, again at a lesser cost to the Federal government than the programs proposed under Title III.

Question: Would you not also agree that the concerted effort of the eight governors demonstrates their commitment to this important program?

Answer: The letter sent to Chairman Byrd by the Governors of the eight High Plains States does demonstrate their commitment to the program, albeit at relatively generous Federal support levels for the Ogallala Aquifer Research and Development effort.

State Water Resources Research Institutes

Question: On a related subject, would you not also agree, Mr. Secretary, that the State Water Resources Research Institutes have done an outstanding job, and that their Federal assistance has declined, in relation to the value of the dollar, over recent years?

Answer: The Water Resources Research Institutes, nationwide, have done an outstanding job with very limited resources. The appropriation for the Institutes has been constant at $5.7 million since 1987; this is a decrease in real dollars.

BIA Law Enforcement

Mr. Secretary, when the head of the Bureau of Indian Affairs (BIA) appeared before the Subcommittee earlier this year, I asked whether BIA has -- either through headquarters or through the Area Offices -- undertaken a comprehensive review of the law enforcement needs of the various pueblos and tribes. Without a doubt, one of the most frequent requests to my office is for additional resources for tribal law enforcement efforts.

In BIA's written response, the agency indicated that the Albuquerque Area Office, Division of Law Enforcement Services, had recently completed a review of the area law enforcement program and would soon be finalizing these results in a Law Enforcement Concept Document. BIA indicated that the review was being conducted by tribal chiefs of police, BIA criminal investigation staff, and agency superintendents. The agency further indicated that the BIA staff, and I assume that means headquarters, would review the document and may consider including an increased funding request in the FY 1992 budget.

Question: Has the Law Enforcement Concept Document been completed?

Answer: The Law Enforcement Concept document was completed by the Albuquerque Area law enforcement staff, at the request of the Albuquerque Area Office Director.

Question: If so, when was it completed? Will BIA headquarters indeed review this document?

Answer: The document was completed in July of 1990. Central Office has no plans to comment on or make changes to the document, but will request a copy form the Albuquerque Area Office to assess whether such a process would be helpful to other areas.

Question: How long would you expect this review to take?

Answer: As stated above, no formal Central Office review is planned.

I hope you will consider this my formal request for a copy of this document, with the headquarters comments.

Answer: The Bureau will request a copy and forward it as soon as it is received.

Question: Does the Department have any plans to expand this type of assessment to other Area Offices?

Answer: The Bureau has no plans to direct other areas to produce such a document, but, after Central Office has studied the document, area law enforcement staff may be encouraged to discuss the process with the Albuquerque staff who prepared the document.

Navajo Academy

Question: What is the Department's position on bond financing?

Answer: Given the unusual nature of the Academy's proposal to finance construction through a lease, it is the Department's position that new legislative authority would be required before such an agreement could be entered into. In addition, appropriations to cover the lease payments would be required. Finally, the Academy would have to occupy the building prior to release of funds to the school, pursuant to GSA regulations, unless this restriction was addressed legislatively.

Question: Has Interior rated the Academy in its school construction priority system?

Answer: The Academy applied for new school construction as part of the FY 1992 priority setting process. However, the Academy's proposal, which was one of 31 applications, did not rank among the top ten projects and therefore, did not proceed to further stages in the planning process.

QUESTIONS SUBMITTED BY MARK O. HATFIELD

SPOTTED OWL

Secretary Lujan, now that the Spotted Owl has been listed as a Threatened Species, efforts are being made to come up with interim measures for the owl's protection.

Question: Recognizing that your department includes both the Bureau of Land Management and the Fish and Wildlife Service, what role do you plan to play in the crafting of both interim and long-term owl protection measures?

Answer: I have been working closely with Director Jamison and Director Turner, as well as Secretary of Agriculture Yeutter, to develop alternative approaches to the management of the forests in Western Oregon. I am serving on the Administration's Task Force that is looking at long term approaches. Within the Department of the Interior we have a number of different mandates to implement. It is my job to see that implementation occurs in a balanced, appropriate manner, consistent with what the law requires. I intend to continue to do that. In doing so I will rely on the judgement and advice of my bureau directors and the perspectives that they bring from their programs.

Since February of this year, 1,009 Oregonians have lost their jobs due to mill closures. As the administration works to craft protection measures for the spotted owl, its is vital that a plan be developed that is workable, and that takes into account social and economic realities. Mr. Secretary, if we fail, those thousand Oregonians are going to have lots of company.

Question: Do you agree that the stakes are high and that it is important to factor in the future of our rural communities when crafting an owl protection plan?

Answer: Yes, we must balance concern for threatened species with concern for the welfare of the workers in the affected communities.

You and Secretary Yeutter recently held a press conference to announce the formulation of a task force to review owl protection measures. That task force is charged with the responsibility of creating a plan for interim protection by September 1st.

Question: What is the makeup of the task force?

Answer: The members of the task force are the Secretary of Agriculture (chair), the Secretary of the Interior, The Administrator of the Environmental Protection Agency, the Chairman of the Council of Economic Advisors, The Director of the Office of Management and Budget, and the Assistant to the President for Policy Development. In addition, the Director of the Bureau of Land Management, the Director of the Fish and Wildlife Service, and the Chief of the Forest Service serve as an *ex officio* members of the task force.

Question: Who is representing the Interior Department? The White House? The Department of Agriculture?

Answer: The Secretary of the Interior represents the Interior Department. He is joined by the Director of the Bureau of Land Management and the Director of the Fish and Wildlife Service as *ex officio* members. The Secretary of Agriculture represents the Department of Agriculture. He is joined by the Chief of the Forest Service serve as an *ex officio* member. The Assistant to the President for Policy Development and the Director of the Office of Management and Budget represent the White House.

Question: Has the task force met? How often? What is their schedule for future deliberations and how do they intend to consult with members of Congress?

Answer: The task force has met; their staffs meet regularly in working groups. The task force itself will meet as often as necessary to put together the plan requested by September 1. Meetings have been held with members of Congress and their staffs. Further meetings will be held at the request of the members and as the task force begins to develop ideas and recommendations.

Included in the announcement was the Interior Department's intention to implement the BLM's alternative owl management plan as an interim protection measure.

Question: Does this mean that the task force will not be reviewing owl protection on BLM lands?

Answer: I support moving forward with the BLM plan as an interim strategy.

Question: Does this plan have the Interior Department's "seal of approval?"

Answer: There is no expectation that Interior will need, or be expected to, approve the 1991 Forest Service plan.

Question: As originally drafted, the plan is a multi-year plan. Does the administration plan on using the BLM

plan as its long-term strategy for owl protection on public domain lands?

Answer: The BLM plan was developed as a short-term or interim strategy only, with long-term strategy to flow from the Fish and Wildlife Service's recovery plan for the northern Spotted Owl and the new BLM resource management plans for western Oregon scheduled for implementation in FY 1993.

Question: How does this mesh with the obligation of the Fish and Wildlife Service to craft a long-term recovery plan?

Answer: The Fish and Wildlife Service is in the early stages of preparing a recovery plan for the owl. In this process, the Service will consider the possible effectiveness of all the strategies that have been advanced for conserving the species, and will solicit comments and recommendations from the public as part of its investigations. The Jamison plan is presently an interim approach to be pursued only over a 2-year period while the Bureau completes its new 10-year resource management plan. In that sense it represents the Bureau's attempts to preserve options so that a longer-term plan can be developed. The Jamison plan will be evaluated both in its present form and as it leads to a long-term strategy for conserving the owl. It is neither necessary nor particularly helpful at this stage of its development to attempt adopting it as the Department's overall long-term plan.

Now that the owl is listed, the land management agencies must engage in a formal "consultation process" with the Fish and Wildlife Service on all actions which may adversely affect the owl.

Question: How confident are you that the actions allowed under the "Jamison Plan" will be approved by the Fish and Wildlife Service?

Answer: If asked to do so, the service will provide BLM its comments and ideas on the Jamison plan. However, at this time the Service has not received any request to approve or disprove that approach. The strategy, proposed by BLM as an interim approach while it completes development of its new 10-year resource plan in 1992, does not contain sufficient detail to allow a careful evaluation of its likely efficacy. However, the Service will thoroughly review BLM's management actions as they relate to spotted owls through the Section 7 consultation process as the Service reviews BLM's timber sale program. In this capacity, the Service will give every consideration to the approach that BLM is taking towards management and conservation of the owl.

Question: Exactly what does the Fish and Wildlife Service think about the BLM plan?

Answer: The Service does not believe it has sufficient detail to be able to evaluate the Jamison plan. In some senses, it is more a research strategy aimed at producing a plan than it is a plan capable of being implemented in the long term. As presented, the Jamison plan is simply an interim approach that is intended to help the Bureau preserve options while it completes its new 10-year resource management plan in 1992. To the extent that it incorporates most of the features of the ISC strategy as its interim approach, the Service recognizes its basis in the best available scientific information supporting the owl conservation. The Service has reservations, however, regarding such features as the probability of providing adequate dispersal of owls without adopting the 50-11-40 principle and the probability of finding a way of artificially maintaining owls at population densities substantially above those now known in order to minimize the size of habitat conservation areas and increase their spacing.

Timber Harvest

The current BLM land and resource management plans allow 1.16 BBF of timber to be harvested. Section 318 allows for 950 mmbf. The Bureau tells us that under the Thomas Committee's recommendations, the harvest levels would drop to 500 mmbf, but that their plan will allow 750 mmbf.

Question: Because we must rely on agency expertise on these matters, I would like to know what confidence do you have in this latest estimate?

Answer: We believe a timber sale level of 750 mmbf can be attained by BLM in both FYs 1991 and 1992 while still preserving management options at the end of the current planning process for both Spotted Owl habitat and timber sales. However, there are uncertainties in offering this level due to the continuing discovery of additional owl pairs as well as to the consultation process with the Fish and Wildlife Service.

Question: Is 750 mmbf a sustainable harvest level if the BLM maintains both HCA and SOHA networks?

Answer: No, it was only intended as an interim level for FY 1991 and 1992 which covers the period of time until the six new BLM resource management plans are completed and ready for implementation in 1993.

Officials at the BLM have indicated that they believe the timber sale level under their plan can be increased to

950 mmbf as they bring on line their new land and resource management plans.

Question: What changes in planning will allow for this sale level increase from 750 mmbf?

Answer: It is premature to estimate any sustainable timber harvest level that will be linked to the new resource management plans to be completed in 1992. Major unknown factors in that decision, the requirements of the Fish and Wildlife Service recovery plan, and the results of ongoing spotted owl research and monitoring efforts. There are also many other unknown factors, including public input and other multiple use resource management considerations that will also influence this outcome.

As the BLM heads into this plan review process, they will need to deal with a number of other issues besides the owl -- stream protection, watershed health, rotation length, wildlife protection.

Question: Will these issues require timber harvest reductions in addition to those due to the spotted owl? How does this square with the projected sale level increase under the BLM owl management plan?

Answer: It is too early to predict the outcome of resolution of such other issues in BLM's planning process. The resource management plans' preferred alternatives will be selected after analysis of five commonly formulated alternatives as follows:

Alternative A - Emphasize high production of timber and other economically important values to contribute to community stability.

Alternative B - Emphasize timber production to contribute to community stability consistent with the variety of other land uses such as fish and wildlife habitat, recreation, and scenic resources.

Alternative C - Provide timber production to contribute to community stability consistent with maintenance of biological diversity and the variety of other uses such as fish and wildlife habitat, recreation, and scenic resources.

Alternative D - Emphasize protection and reestablishment of spotted owl habitat, along with management and enhancement of other values such as dispersed non-motorized recreation opportunities and scenic resources, while sustaining some timber production. This will incorporate the recommendations of the Interagency Scientific Committee Report.

Alternative E - Emphasize protection of older forests and management and enhancement of values such as dispersed non-motorized recreation opportunities and scenic resources.

Question: As the BLM attempts to increase management for these other values, do you foresee a conflict of BLM lands in Southwest Oregon that are managed under the O&C Act which specifies timber production as the dominant use?

Answer: The mandate of the O&C Act will strongly influence the resolution of such issues in the planning process except when other legal mandates, such as the Endangered Species Act and the Federal Water Pollution Control Act are overriding.

Included in the Interagency Scientific Committee's report are recommendations to set aside large areas of owl habitat (averaging 60,000 acres in size) known as Habitat Conservation Areas (HCAs). O&C grant lands in Oregon are largely arranged in a fragmented, "checkerboard" pattern that include many private land "inholdings."

Question: How would the imposition of HCAs affect private lands?

Answer: The BLM has no control over the private lands. The May 1, 1990 Economic Analysis, however, did note that full implementation of the ISC strategy would result in a reduction in harvest of 260 MMBF from private lands in Oregon, Washington and California and a loss of 2,756 jobs associated with that.

The establishment of HCAs would preclude roadbuilding to allow private landowners access to private inholdings.

Question: What obligation does the Department have to assure these citizens the right to get to their own land?

Answer: Where reciprocal road use agreements exist, they create an obligation for BLM to provide access to private parties to their own lands. In the absence of such an agreement, denial of access might be construed as inverse condemnation, which may possibly require payment of compensation by the United States.

There is some concern that the listing decision could adversely affect the achievement of current timber volume goals as set out in last year's section 318 language.

Question: Can you tell the Committee how the listing decision will effect the FY 90 timber sale volume from the Bureau of Land Management?

Answer: Of the FY 89 and FY 90 sales offered pursuant to Section 318 of the FY 1990 Appropriations Act for the Department of the Interior and Related Agencies, BLM has made a "may affect" determination on sale totalling 681 MMBF, including 159 MMBF of sales already awarded. The sales already awarded include land containing a spotted owl nest site or the center of activity of an owl pair active in the last 5 years. To the extent that formal consultation with FWS results in modification of these sales, BLM's FY 90 volume could fall short of the volume commitment set in Section 318, as substitution of other sales at this late date will not be possible.

Question: How about the pre-1990 volume under contract that has not yet been cut?

Answer: BLM has initiated consultation on 6 timber sales totalling 37 MMBF that pre-date Section 318 coverage. These sales include land containing a spotted owl nest site or the center of activity of an owl pair that has been active in the last 5 years.

The BLM has been working on a new timber inventory that it will use in developing their new forest plans.

Question: What does that inventory reveal about the volume of mature timber on BLM lands as compared with the old one? What impact will this have on future timber harvest levels?

Answer: We are currently in the process of compiling this data. We will not be able to make this comparison until Fall, 1990.

Question: Has the BLM been doing any work on alternative harvesting activities?

Answer: Two timber sales during 1990 were designed as operational tests of our ability to accelerate development of old-growth characteristics on spotted owl habitats. New research and studies on alternative harvesting and silvicultural techniques are being identified by BLM which need to begin in 1991.

Question: Will there be options available that present alternatives to clearcutting on BLM lands?

Answer: We expect BLM's new resource management plan alternatives to consider uneven-age management in stands where this method would be economically feasible and would maintain environmental values. This option will be most applicable in southwestern Oregon. In addition, BLM intends to include in its plans a sensitivity analysis of the application of "new forestry", making that option available for consideration.

I understand that the BLM is operating under a three year backlog with regard to reforestation.

Question: How did this occur? Has the Congress underfunded reforestation accounts?

Answer: The BLM's current "backlog" situation was caused by a combination of factors starting in the mid-1980's. These factors include the loss of herbicide use as a management tool due to a court injunction, several years of drought, and the highest acreage of timber harvest in BLM history due to high market prices and the need to salvage fire damaged timber.

The magnitude of the carryover backlog was first identified by BLM in 1989 for the FY 1990 appropriations and was referred to as "backlog". These acres of "backlog" identified the highest priority critical treatment needs where plantation survival was threatened or "biological treatment windows" were passing.

A second identification of carryover needs was portrayed in the 1991 President's Budget and discussed in the section entitled "Reassessment of Reforestation and Forest Development Needs" (page BLM - 409). These levels of carryover needs are based upon a more complete analysis completed in late 1989 which reassessed and updated treatment needs for western Oregon along with an updated assessment of anticipated accomplishments as a result of the additional funding made available from the "excess receipts".

The estimate in the 1991 President's Budget of the magnitude of the treatments needed was larger than previous estimates due to better and more up-to-date data as well as the employment of better definitions for treatment needs and common rules of applying these definitions. For example, the previous estimates utilized, in some cases, the technical definition of "backlog", which, for reforestation purposes does not occur until 5 years after deforestation. The revised numbers include all acres in need of reforestation as well as acres of anticipated retreatment due to initial treatment failures, regardless of when the deforestation occurred.

The current, most up-to-date estimate of the acreage in need of treatment that is expected to carryover into 1991, is as follows:

Treatment Type	Acres
Site Preparation	41,900 acres
Reforestation	10,600 acres
Plantation Maintenance	97,100 acres
Precommercial Thinning	39,500 acres
Fertilization	89,000 acres

The 1990 Appropriations Act for the Department of the Interior and Related Agencies, which authorized the use of "Excess Receipts", began to recognize the magnitude of the problem and has put the BLM on a track to begin to eliminate the treatment needs backlog. This 1990 Appropriations Act provided a regular appropriation for Reforestation and Forest Development in FY 1990 of $30,313,000 which was supplemented by $19,193,000 from the availability of "excess receipts. Approximately $13,602,000 of the "excess receipts" are anticipated to by obligated in 1990 thereby leaving approximately $5,591,000 available for use in 1991. This will be in addition to the $29,783,000 requested in the 1991 President's Budget.

The President requested $35.3 million ($29.7 million appropriations, $5.5 million excess receipts) for BLM reforestation needs.

Question: What do you estimate that it would require to eliminate the backlog? (The N.W. Reforestation Contractors estimate that it would take over $48 million total.)

Answer: BLM's latest estimate is that it would take a total appropriation level of $42.3 million to perform all appropriate reforestation and forest development treatments for western Oregon timber lands. Assuming an orderly treatment schedule to use efficiently both BLM and private sector capabilities to accomplish these actions, a 3-year program of approximately $14.1 million per year in additional funding could be used. Such an increase would have to be offset elsewhere in the Department's budget.

Offshore Oil and Gas Leasing

You recently approved the recommendations of a federal/state task force which advocated a delay in oil and gas leasing activity for lease sale #132 off of the Oregon and Washington coasts.

Question: What is the real effect of this decision as compared to a one-year moratorium enacted through the appropriations process?

Answer: The Pacific Northwest OCS Task Force recommendations allow for a series of studies to be completed that are intended to resolve concerns over leasing in this area. The studies are expected to take about 5 to 7 years to complete. The Pacific Northwest OCS Task Force is an example of the successful cooperation between a State and the Federal Government to resolve concerns over OCS leasing and development. In contrast, an annual moratoria does not allow for successful cooperation, as it removes the incentive from the affected parties to negotiate legitimate concerns.

Question: When and if the Department chooses to resume activities relative to lease sale #132, what efforts

will the Department undertake to assure the participation of the Governors from the affected states?

Answer: Prior to the President's decisions, the Department had worked closely with representatives appointed by the Governors of Washington and Oregon on the Pacific Northwest OCS Task Force. The Department has advised the Governors that the body of studies recommended by the Task Force will be completed over the next 5 to 7 years. No lease sale will be considered prior to the completion of the studies. Throughout the study process, and any subsequent activities with regard to consideration of leasing offshore Washington and Oregon, the Department will continue to seek the active involvement of the States and affected Native Tribes. This effort will ensure that when a decision is reached as to the ultimate status of future program activity, the States will have full knowledge of the information and participation in the process upon which that decision is based.

Animas - La Plata

The Fish and Wildlife Service recently issued a biological opinion for the Animas-La Plata project as it affects the squawfish.

Question: How does the Department plan to balance this decision with its trust responsibilities for the Ute Indian Tribe?

Answer: The Department does not see its trust responsibility to the Colorado Ute Tribes as being in conflict with its duties under the Endangered Species Act. The Department negotiated the settlement of the Colorado Ute Tribes' water rights claims from the position that, although the Tribes' rights were paramount, a negotiated solution would be more beneficial than a judicial one. In the course of those negotiations, it was recognized by the parties to the settlement that there might be any number of contingencies, including endangered species problems, which might jeopardize the Animas-La Plata Project.

For that reason, the settlement agreement contains provisions that provide the Tribes their choice of several remedies in the event the project is not built. Thus, the Department is both implementing the Endangered Species Act and diligently pursuing its trust responsibility to the Tribes. It should be noted that the Department is committed to negotiated Indian water rights settlements which benefit all parties and believes that continued discussions will provide acceptable solutions.

Question: Why wasn't the Congress afforded the benefit of this determination prior to the enactment of the Colorado Ute Indian Water Rights Settlement Act?

Answer: The Colorado Ute Indian Tribe Water Rights Settlement Act was enacted on November 3, 1988 implementing the settlement negotiated in 1986. The Fish and Wildlife Service issued an opinion in 1979 that indicated that the squawfish was not jeopardized by the proposed Animas-La Plata Project but qualified this opinion stating that additional studies should be conducted and information from such studies might require reinitiation of Section 7 consultation. The results of these studies prompted the Bureau of Reclamation's February 1990, request for reinitiation resulting in the current draft biological opinion. Thus, neither the Department of the Interior nor the Congress had the benefit of this current endangered species evaluation during the settlement negotiations in 1986 or prior to enactment of the settlement legislation in 1988.

QUESTIONS SUBMITTED BY FRANK R. LAUTENBERG

OCS Leasing

Question: What is the status of the draft environmental impact statement for OCS lease sale 121?

Answer: In 1989, North Carolina Governor James Martin and U.S. Congressman Walter Jones requested that Sale 121 be delayed. Additionally, a Congressional moratorium attached to the Department's FY 1990 Appropriations Act specifically prohibited the Department from working on leasing or preleasing steps for an area within 50 miles of shore. Work on the draft environmental impact statement for OCS Sale 121 was discontinued and has not resumed.

Question: When do you plan to issue the draft environmental impact statement for OCS lease sale 121?

Answer: Since work on the draft environmental impact statement was discontinued and has not resumed, there are not specific plans at the present time to issue the draft document.

Question: When do you plan to conduct the sale?

Answer: The date of Sale 121 has yet to be determined, however, it will not occur in Fiscal Year 1991, as originally planned.

Question: How much money will it cost the Department of the Interior to plan for this lease sale, including the cost for environmental studies?

Answer: The level of planning and funding needed to accomplish Sale 121 is dependent on the outcome of the Mobil exploration plan, the environmental documents evaluating this drilling proposal off North Carolina are expected to be completed in September 1990. At that time, the Department will have a better understanding of environmental studies needed for consideration of future offshore oil and gas activities, and will, therefore, be able to plan for them.

Question: Has industry maintained interest in this sale? Have there been any new industry interests within the past year? Have any previous industry interests ceased or declined?

Answer: During the preparatory process for Sale 121, a Request for Interest (RFI) was issued in May 1987. At that time, four companies affirmed their interest in the Mid-Atlantic Planning Area. Based on results of the RFI, a Call for Information and Nominations was issued in September 1987. The Area Identification decision, publicly announced in January 1988, identified 1,222 blocks on approximately 6.9 million acres to be analyzed in the EIS. The Department has not been notified by any company that their interest in the hydrocarbon reserve has significantly changed. One indicator of the current level of industry interest in the Mid-Atlantic Planning Area may be the determination of Mobil and its partners in pursuing its drilling proposal, notwithstanding the level of local public opposition and scrutiny from the State of North Carolina. The results of any drilling by Mobil will clearly influence industry interest in the area.

Question: Has the Department's estimates of recoverable resources changed over the past year?

Answer: The resource estimates for Sale 121 were approved in May 1989 to be used in the Environmental Impact Statement (EIS). For the primary case, the conditional mean economically recoverable resources for Sale 121 estimated to be leased, discovered and produced are 79 million barrels of oil and 2.42 trillion cubic feet of gas, with a probability of 0.29 that economically recoverable hydrocarbons exist in the area under study.

Question: Have the Department's estimates of the value of recoverable resources for this sale changed over the past year? If so, how? Please explain for both oil and gas resources.

Answer: No, the Department's estimates have not changed over the past year. Net economic values are based on the May 1989 resource estimates.

Question: During the past year, has the Department developed any new information concerning estimates of environmental and economic damage to New Jersey's coastal tourism and fishing industries from: 1. a major oil spill, 2. the negative visual impacts from oil and gas activities, and

3. the potential spatial conflicts with New Jersey's inshore coastal fisheries?

Answer: A Congressional moratorium attached to the Department's FY 1990 Appropriations Act specifically prohibited the Department from working on leasing for the area within 50 miles from shore, from the northern boundary of the planning area to the Maryland-Virginia border. Additionally, North Carolina Governor James Martin and U.S. Congressman Walter Jones asked that Sale 121 be delayed. In response, Sale 121 was placed on hold and the draft EIS document was not published. The draft document included analyses of the potential effects of offshore oil and gas exploration on a variety of environmental and economic resources, including coastal tourism and the fishing industry. The effects of a major oil spill, visual impacts from oil and gas activities, and the potential for spatial conflicts between oil and gas activities and fisheries, including New Jersey's inshore coastal fisheries, were examined.

Question: Have the environmental impacts been analyzed of the State of New Jersey's recommendations to delete: 1. all tracts within 50 miles of the shore, 2. submarine canyon tracts, and 3. tracts which pose a problem of spatial exclusion with longline fishermen? If so, what conclusions has the Department reached as a result of these analyses?

Answer: The unpublished draft EIS document for Sale 121 includes discussion of the potential effect of alternative to the proposed action including the deferral of the blocks within 50 miles of shore, as well as deferral of blocks in or near submarine canyons. Although not treated as a separate alternative, the potential effects of activities in the areas. of longline fisheries were considered along with other fisheries issues for each potential configuration of the sale. Since the EIS has not been published, the Department has not reached any conclusions regarding these issues.

The Department recently announced a new OCS leasing policy for the next five year OCS oil and gas leasing plan that would restrict the total offshore area available for leasing, but still allow drilling in areas where it is now banned.

Question: What impact would this policy have on OCS lease sale 121 and leasing in the Mid-Atlantic in general?

Answer: The Department has initiated preparation of an OCS oil and gas program for 1992-1997 and, in December 1990, plans to issue the first of three draft proposals required by the development process outlined in section 18 of the OCS Lands Act. Development of the program will be guided by the President's decision on the OCS Task Force report, which set forth specific directives and general principles concerning information and analysis needs, environmental sensitivity, resource potential, national energy requirements, and national security requirements. As a result, the new program will be more sensitive, targeted, and more responsive to environmental needs. Sale 121, and leasing the Mid-Atlantic Planning Area in general, will be considered in accordance with this new policy.

Question: If the Department adopts a new policy that allows for the exclusion of environmentally sensitive tracts, would it be prepared to exclude environmentally sensitive tracts from lease sale 121?

Answer: The Department will look carefully at possible exclusion of environmentally sensitive tracts in the Mid-Atlantic Planning Area for any future decision. The Department is carefully considering means of implementing the guidance contained in the President's decision on the OCS Task Force report. The Department's initial proposal will be explained in the December 1990 draft proposed program for 1992-1997.

CONCLUSION OF HEARINGS

Chairman **Byrd**. I thank you very much. The subcommittee will stand in recess awaiting the call of the Chair.

[Whereupon, at 11:55 a.m., Thursday, July 12, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

Page

Almand, J. David, Chief, Division of Wildlife and Fisheries, Bureau of Land Management, Department of the Interior 1
  Biographical sketch 13
Ary, T S, Director, Bureau of Mines, Department of the Interior 121
  Prepared statement 125

Bechtel. Tom, Director, Morgantown Energy Technology Center, Department of Energy 201
  Biographical sketch 228
Berg, Mel, Chief, Division of Forestry, Bureau of Land Management, Department of the Interior 1
  Biographical sketch 12
Bond, Hon. Christopher S., U.S. Senator from Missouri 581
  Prepared statement 583
Brown, David S., Associate Director, Information and Analysis, Bureau of Mines, Department of the Interior 121
Bumpers, Hon. Dale, U.S. Senator from Arkansas, questions submitted by 186, 367, 781
Burns, Hon. Conrad, U.S. Senator from Montana 579

Cheney, Lynne V., Chairperson, National Endowment for the Humanities 379
  Prepared statement 381
Cherrington, Stephen, Director, Office of Planning and Budget, National Endowment for the Humanities 379
Chun, Dr. Sun, Director, Pittsburgh Energy Technology Center, Department of Energy 201
  Biographical sketch 227
Colgan, Celeste, Deputy Chairman for Programs/Administration, National Endowment for the Humanities 379
Cranston, Hon. Alan, U.S. Senator from California 602
  Prepared statement 605

Davis, J. Michael, Assistant Secretary Conservation and Renewable Energy, Department of Energy 615
DeConcini, Hon. Dennis, U.S. Senator from Arizona, questions submitted by 104, 184
Domenici, Hon. Pete, U.S. Senator from New Mexico, questions submitted by 117, 528, 792
Donahue, James F., Chief, Division of Budget, Bureau of Mines, Department of the Interior 121

Fagin, Robert F., Deputy Director, Administration and Finance, Office of Surface Mining Reclamation and Enforcement [OSMRE], Department of the Interior 259
  Biographical sketch 266
Fineman, Ron, Director, Budget Office, National Endowment for the Arts 425
Forshey, David R., Associate Director, Research, Bureau of Mines, Department of the Interior 121
Frohnmayer, John E., Chairman, National Endowment for the Arts 425
  Biographical sketch 465
  Prepared statement 438, 451

Gallegos, Lou, Assistant Secretary, Policy, Management and Budget, Department of the Interior 669

Page

Gayer, David, Solicitor's Office, Department of the Interior 669
Gentile, Robert H., Assistant Secretary for Fossil Energy, Department of Energy 201, 615
  Biographical sketch 226
  Prepared statement 204

Hatfield, Hon. Mark O., U.S. Senator from Oregon, questions submitted by 108, 799
Heisel, Kristi A., Acting Chief, Division of Budget, Planning, and Management Analysis, Office of Surface Mining Reclamation and Enforcement [OSMRE], Department of the Interior 259
  Biographical sketch 265
Hildebeidel, Roger L., Chief, Division of Budget, Bureau of Land Management, Department of the Interior 1

Itteilag, Anthony, Director, Office of Budget, Department of the Interior 1, 121, 259, 669

Jamison, Cy, Director, Bureau of Land Management, Department of the Interior 1, 669
  Biographical sketch 11
  Prepared statement 5

Nickles, Hon. Don, U.S. Senator from Oklahoma, questions submitted by 197

Lander, Walter J., Associate Director, Finance and Management, Bureau of Mines, Department of the Interior 121
  Biographical sketch 129
Lautenberg, Hon. Frank R., U.S. Senator from New Jersey, questions submitted by 197, 364, 809
Leahy, Hon. Patrick J., U.S. Senator from Vermont, questions submitted by 779
Lott, Hon. Trent, U.S. Senator from Mississippi, questions submitted by 612
Lujan, Hon. Manuel, Jr., Secretary of the Interior, Department of the Interior 669
  Prepared statement 672
Luthi, Randall, Solicitor's Office, Department of the Interior 669

McCain, Hon. John, U.S. Senator from Arizona 587
  Prepared statement 587
McClure, Hon. James, U.S. Senator from Idaho, questions submitted by 90, 186, 367, 419, 516, 654, 758
McElwrath, Michael R., Principal Deputy Assistant Secretary, Department of Energy 201
  Biographical sketch 227
Mitchell, Roger, L., dean, University of Missouri-Columbia, letter from 586
Morgan, John D., Jr., Chief Staff Officer, Bureau of Mines, Department of the Interior 121

Oklahoma Waste Resources Board, letter from 795

Rand, Cynthia, Deputy Chairman for Management, National Endowment for the Arts 425

Siegel, Jack S., Deputy Assistant Secretary for Coal Technology, Department of Energy 201
Singer, Marvin I., Deputy Assistant Secretary for Oil, Gas, Shale, and Special Technologies, Department of Energy 201
Smedley, Elizabeth E., Controller, Department of Energy 615
Snyder, Harry M., Director, Office of Surface Mining Reclamation and Enforcement [OSMRE], Department of the Interior 259
  Biographical sketch 264
  Prepared statement 261
Steele, Ana, Acting Deputy Chairman for Programs, National Endowment for the Arts 425

Tipton, W. Hord, III, Deputy Director, Operations and Technical Services, Office of Surface Mining Reclamation and Enforcement [OSMRE], Department of the Interior 259
  Biographical sketch 265

Page

Turner, John, Director, U.S. Fish and Wildlife Service, Department of the Interior 669

Wahlquist, Brent, Assistant Director, Program Policy, Office of Surface Mining Reclamation and Enforcement [OSMRE], Department of the Interior 259
Walsh, Jeremiah E., Jr., Deputy Assistant Secretary for Management, Fundamental Research and Cooperative Development, Department of Energy 201
Watkins, Adm. James D., Secretary of Energy, Department of Energy 615
  Prepared statement 616
Watson, Harlan, Deputy Assistant Secretary, Water and Science, and Science Advisor to the Secretary, Department of the Interior 669
Williamson, Barry, Director, Minerals Management Service, Department of the Interior 669
Wilson, Hon. Pete, U.S. Senator from California 590
  Prepared statement 593
Wray, Henry R., Senior Associate General Counsel, Office of the General Counsel, General Accounting Office, prepared statement 470

SUBJECT INDEX

DEPARTMENT OF ENERGY

Fossil Energy

Page
Administrative improvements to program 238
Budget request 201
Clean air legislation 228
Construction at Morgantown 244
Development of substitute fuels 249
Effect of Sharp amendment 230
Energy Technology Centers 247
Fuels:
  Liquid study 248
  Timetable for substitute 250
GAO:
  DOE reaction to report 234
  Study of Clean Coal Technology Program 233
Industrial projects 240
Liquefaction:
  Budget 255
  Coal 251
  Impact of budget request on program 257
National Research Center for Coal and Energy 246
Oil shale 242, 256
Petroleum prices 249
Philip Sporn Plant 231, 242
Project selection 239
Recoupment of Federal investment 243
Repayment provisions 240
Streamlined procedures 232

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Additional committee questions 53
Boise Interagency Fire Center and national disasters 29
Budget request 1
Compliance on assessment work 26
Desert tortoises 47
Environmental and mineral production benefits 27
Global climate:
  Change research 31
    Coordination 31
Grazing management funding needs 32
Holding fee:
  Assessment work 27
  Effect of on small miner 28
  Mining claim proposal 15
  Proposed legislation 16
  To reduce speculation 26
Land acquisition 50
Lands and realty program casework 17
Las Vegas interagency office complex 49
Law enforcement in Nevada 48

Page
Mary's River exchange 17
Oil and gas:
  Inspection program 13
  Producing leases 24
Oilspills 25
Outlook for this fire season 49
Planned levels of inspections 14
Range:
  Lands, condition of the 33
  Management practices-juniper chaining 45
Red Rocks Recreation Area 47
Riparian area management 46
Slippery well policy 25
Spotted owl conservation strategies 50
Summary statement, director's 2
Theft of oil 15
Timber receipts 22, 23
Transfers of horses to underdeveloped nations 20
Volunteer efforts 45
Water rights:
  Clark County, NV 51
  Legislation 48
Wild horses:
  And burro population 18
  Fertility studies 19
  Population management 21
  Sanctuaries—self-sufficiency 19, 20
Wildlife habitat management funding 46

BUREAU OF MINES

Additional committee questions 154
Bureau of Mines/EPA cooperation 151
Budget request 121
Comments:
  Directors' 146
  Senator Domenici's 147
Dust, respirable 139
Environmental aspects 149
FTE incremental costs 131
Health, occupational 138
Mine:
  Disaster prevention 143
  Safety systems 142
Mineral Institutes 148, 150, 152
Mining:
  Advanced systems 140
  Injuries and fatalities 133
  Systems 137
  Technology, health, safety 136
Regulatory analysis 152
Research reductions 130, 131, 132 143, 145
Self-contained self-rescuer 144

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT [OSMRE]

Additional committee questions 355
AML:
  Emergency funding 349
  Grants 343, 344, 346
  Inventory 346
    Review 348
Applicant/violator system 340, 341, 349
AVS:
  Cost sharing 341
  Funding 350
Budget request 259
Enforcement staff 274, 337

Page
Fiscal year 1990 shortfall 352
Mine inspections 338
OSM:
  Budget request 260
  Inspections 339
  Oversight 267
  Overview 266
  TIPS support to States 351
Schedule C employees 353
State:
  Obligations 345
  Primacy 266, 267
  Regulatory grants 350
Technical information processing system 342
TIPS 352
Volunteerism 353
West Virginia program 268, 274, 338, 354

SECRETARY OF ENERGY

Additional committee questions 653
Alternative fuels study 648
Carbon tax 626
Clean Air Act amendments:
  House version 624
  Impact of 625, 627
  Senate version 625
Clean coal technology 622
Coal:
  Research and development restoration 651
  Research priorities 649
Competitiveness research projects 648
DOE's relations with Nevada 641
Endangered species 636
Energy:
  Assistance for Lithuania 632
  Consumption and GNP 630
Enhanced oil recovery 643, 644
Financial assistance to Nevada 638
Fossil budgets, reductions to 652
House Clean Air Act amendments, impact of 629
Legal situation in Nevada 639
Meeting future energy needs 632
Metals initiative 645
Mobile emissions test laboratory 651
National energy strategy 623
Oil imports, impact of 642
Public hearing comments—Yucca Mountain 635
Purchasing enriched uranium from the U.S.S.R 633
Technology transfer 644
Utility utilization of new technologies 626
Waste isolation pilot plant 642
WEPCO decision 628

SECRETARY OF THE INTERIOR

Abandoned mine:
  Land program 687
  Reclamation grants funding 685
  Sites 706
Additional committee questions 723
Alaska subsistence 700
America the Beautiful 670
AML emergency projects 686
BLM maintenance needs 689
Bonding:
  Policy and mining law 707
  Requirements 714

Page
California versus New Jersey ... 711
Clean Air Act enforcement responsibilities ... 697
Components of endangered species decisions ... 718
Concessions operations in the national parks ... 703
Congress and Governors, consultation with ... 717
Departmental receipts ... 670
Endangered Species Act review ... 719
Estimating revenues ... 695
Existing leases versus new leases ... 712
Firebreaks in Alaska ... 702
Funding requirements, fiscal year 1991 ... 684
Flooding at Hot Springs National Park ... 703
Indian Gaming Commission ... 699
Inspector general report ... 692
Inventory of the BLM maintenance backlog ... 690
Lake Tahoe Basin susceptibility to fire ... 698
Land acquisition policies ... 691
Lease study areas ... 694
Legacy '99 ... 670

Maintenance backlog:

  In the Department ... 688
  Of the National Park Service ... 691
Mellon donation ... 671

Mining:

  Claim holding fee ... 695
  Fees ... 694
  Inspection of claims ... 707
  Law of 1872 ... 705
    Merits ...
  Number of patents ... 707
  Payors of claim fee ... 696
Natchez National Park Commission ... 708
Newlands project ... 699
Parklands, access to ... 700

OCS:

  Leasing off the New Jersey coast ... 709
  President Bush's decision ... 693
  President's announcement of program ... 671
Protection of West Virginia's cultural and natural resources ... 684
Reevaluation of sale 121 decision ... 710
Schedule C appointments ... 693
Section 318 implications ... 716

Spotted owl:

  Listing ... 671
  Presence of ... 720
    And effect on timber production ... 715
  Task force ... 716
Staffing levels in OSM ... 692
States' obligation rates ... 687
Status of Federal regulations ... 701
Stillwater Refuge ... 698
Striking a balance between resource protection and production ... 711
Studies to determine environmental impacts ... 710
Thomas report considerations ... 721
Timber exports ban ... 718
Use of Federal lands resources ... 714

NATIONAL ENDOWMENT FOR THE ARTS

Additional committee questions ... 499
Artists in school program ... 436
Budget request ... 425
Grant-giving process ... 450
Grants award review ... 482
Presidential direction ... 485
Reforms ... 466

NATIONAL ENDOWMENT FOR THE HUMANITIES

Page
Accountability and Federal funding 404
Additional committee questions 412
American education, problems of 395
Coordination of preservation activities 401
Educational reform 393
Employers and humanities education 390
Expansion of seminar programs 403
Fellowships division, funding ratio in 408
Gallup survey 387
History textbooks 394
Hours, 50 389
Humanities 400
  Education 396
  Teaching the 387
NEH:
  Education programming and emphases 388
  Foreign language special emphasis 402
  25-year record 392
NEH/UCLA History Center 408
National programs, importance of 404
Newspaper reading, decline in 393
Seminars:
  Schoolteachers participants in 399
  Summer 398
Stipend increase 405
Support for foreign language instruction 408
Teachers, importance of 396

26-172 0 - 91 - (832)